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RICHMOND, APRIL, 1890.

Original Communications.

Art. I.—Palliative Treatment of Fissure of the Anus and Ulcer of the Rectum.

By JOHN P. FURNISS, M. D., of Selma, Ala.

For the cure of the complaints named in the heading of this article, I know of no surgical procedure which is followed by more satisfactory results than stretching the sphincter in the manner proposed by the late Dr. Van Buren. There are cases, however, which will not admit of this method; and there are patients who, from timidity or prejudice, will not submit to it.

The operation, when properly performed, requires the exhibition of an anæsthetic; but patients who have fissures or ulcers developed in the course of protracted typhoid fever, or other prostrating diseases, generally have such weak hearts as to make it hazardous to produce surgical anæsthesia.

During pregnancy, such an operation is likely to be followed by abortion or miscarriage; and yet I did it successfully on a patient who was five and a half months advanced, who lived ten miles from a doctor, and who, her husband

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said, suffered untold agony. I did not do it, and would not do it again, without consultation.

During the past few years I have treated quite a number of cases by palliative methods. Some of these cases occurred in patients in the fourth week of typhoid fever; some after labor and abortion, and in others, the result of ulceration of hemorrhoidal tumors. The majority of the fissures and ulcers were situated at the posterior or coccygeal portion.

I have not limited myself to the use of any one medicament; but I believe my success has been due to the thoroughness of the application to the part affected.

In females, the rectum can be everted by the introduction of the left forefinger in the vagina; but this method requires that the applications be made by the surgeon or a skilled nurse, and it is frequently objectionable and painful to the patient. The use of any kind of speculum has the same disadvantages.

Where the fissure is short, and is rendered accessible by moderate expulsive efforts, the daily application of a four per cent. solution of cocaine, followed by thorough applications of one or the other of these solutions, will generally effect a cure in a week, and the pain will be lessened from the first application.

℞ Argenti nit. cryst.....ʒss.
Aquæ.....f℥j.—Mix.

or ℞ Acidi carbolici.....℥j.
Acidi tannici.....℥j.
Glycerini.....f℥j.—Mix.

When the fissure is long, extending the length of the mucous membrane over the sphincter, I apply the cocaine by wrapping the point of Ultzman's deep urethral syringe, or Mundé's intra-uterine syringe with absorbent cotton, and after the instrument is in apposition with the fissure or ulcer, press out enough of the solution to saturate the cotton. After allowing it to remain *in situ* for three to five minutes, I then apply the solution of carbolic and tannin acids in glycerin.

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I do this once or twice myself, and then furnish the patient with an old style suppository syringe and a box of ointment, with directions to use it twice a day, preferably after evacuation of the bowels and before bedtime. The syringe consists of a glass cylinder and a piston. It is the size of a lead pencil, and is not unlike a boy's pop-gun.

The ointment contains (at first) acid carbolic ℥j. to cerate ℥j.; and later iodoform ℥j. to cerate ℥j. It is put into a metallic box so that it may be kept on ice in warm weather.

The patient is directed to fill the cylinder with one to one and a half inches of the ointment, replace the piston, introduce the syringe into the rectum as far as the medicine in the tube extends, and while withdrawing the syringe, press the piston so as to leave the medicament in its tract.

The patient can use the instrument without assistance, if he has strength enough to give himself an enema, and when he is not strong enough, I have not yet found a nurse who failed to use it after being once shown how.

There is no affection of the same magnitude which entails as much suffering as a fissure of the anus. I believe the contractions of the sphincter aggravate the pain, and perpetuate the disease; but I do not believe that they are the only causes which prevent healing.

A fissure or ulcer in any other part of the body, the eye, or the corners of the mouth, for instance, does not readily heal until the morbid process is subverted or the cause removed.

Pepsin is undoubtedly one of the most valuable digestive agents of our Materia Medica, *provided a good article is used.* Robinson's Lime Juice and Pepsin (see page 28 of this number) we can recommend as such. The fact that the manufacturers of this palatable preparation use the purest and best Pepsin on the American market, and that every lot made by them is carefully tested, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

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Art. II.—A New Method for Artificial Respiration.

By ANDREW H. SMITH, M. D. of New York, N. Y.

To perform artificial respiration with the greatest efficiency, requires two persons. The patient lying on the back, and, if possible, placed upon a table—one operator at the head takes a hand in each of his, and draws the arms directly upward, with a slow and steady pull, continuing the traction until the maximum of thoracic distension is obtained, which will require about three seconds. This accomplished, the traction is relaxed, without, however, attempting to press the arms against the sides. At this moment the other operator, who is kneeling or standing by the side of the patient, presses with both hands forcibly upon the chest in a direction backward and toward the median line, so as to diminish both the depth and the breadth of the lower half of the thorax. This pressure, like the traction, is to be made slowly and steadily, and should be continued until the maximum expiratory result is attained, say two seconds. The pressure is then relaxed, and the traction on the arms follows again immediately. In this way about twelve respiratory movements per minute will be accomplished, under conditions giving the largest excursion of the chest walls attainable by manual procedure.

It will be seen that this is a combination of a part of Sylvester's method with the method of Howard. Sylvester's method is defective, in that it does not provide for efficient compression of the thorax; the position of the operator at the head of the patient making such compression extremely difficult. Howard's plan, on the other hand, does not provide for any expansion of the chest beyond the cadaveric position, and is, upon the whole, much less effective than Sylvester's. A combination of the two, carried out by two persons, secures a very considerable approach to the results of natural respiration, the action of the diaphragm alone being unrepresented. Another very great advantage is the division of labor—either of the other methods being exceedingly fatiguing to the operator.

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ART. III.—The Antiseptic Treatment of Smaller Wounds.

By WILLIAM PERRIN NICOLSON, M. D., of Atlanta, Ga.

PROFESSOR OF SURGERY IN SOUTHERN MEDICAL COLLEGE, ETC.

So much has been written and said on the antiseptic treatment of wounds, that one must feel some hesitation in burdening these pages with anything pertaining to the method; but the fact remains apparent that in the ranks of the profession, there has been too little attention paid to it, and the failure to adopt it causes many serious results.

Few seem to realize how serious may become a very simple wound by improper treatment, and the amount of suffering for the patient, and worry for the surgeon, that is saved by the proper first dressing. As laid down by Gerster "the fate of a fresh wound is in the hands of the surgeon."

But, while many are careful to treat all larger wounds after the clean method, they look upon the small injuries as unworthy of such attention, so the wound is closed with a piece of adhesive plaster, and permitted to do the best that it can. Such wounds must of necessity suppurate, and heal by a slow process, with a resulting scar, all of which is unnecessary. It is to the proper management of this class of injuries that I would call especial attention.

In the first place, any one who has any work of this character, should contract what is known as the "antiseptic habit," which will insure for all wounds the proper care. It may be safely said that no wound that has a tendency to "gape," ought to be closed by adhesive plaster. Nothing is so effective as, or simpler than, a stitch; and the application for a few moments of a solution of cocaine, will cause sufficient anæsthesia, even in a child, to admit of the introduction of a needle without pain. Even if this is not at hand, the momentary pain is far more than counterbalanced by the secure holding of the skin edges, and the subsequent healing without a scar. The close approximation of the cut edges, is undoubtedly one of the most potent factors in securing healing by primary union, as there is left little

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space for the collection of any effused serum. For the closure of the more superficial wounds, nothing will be found more satisfactory than the healing under "iodoform scab." Let us follow the dressing of such a wound.

It is imperatively necessary, as in larger lesions, that the method of cleansing the wound should be thorough. The day of taking out a pocket case and closing the wound with ordinary unprepared silk is past, and any one who carries the case should also have a few tablets of corrosive sublimate, or some other reliable antiseptic with him. It is better to have prepared catgut for sutures, as it does not require any subsequent removal; but silk can be easily prepared at the same time that the wound is being cleansed. The first essential, in my opinion, in the preparing of all wounds, is the thorough washing of the surrounding skin with soap and water. For this purpose I usually carry a cake of juniper tar soap. If the cocaine has been dropped upon the surface, there is no pain caused by rubbing the edges with a piece of absorbent cotton, and the surface can be effectually cleansed. It is doubly imperative to wash well when there is any gross dirt. When the skin has been thus cleansed, it should be rubbed, and the wound irrigated with a solution of corrosive sublimate of seven grains to the pint of water; and if the needle, armed with the silk, has been placed in the solution at the time of beginning the preparations, by stripping the silk through the fingers to insure the fluid reaching all its parts, it will be ready for use. The fingers of the operator should be washed with soap and water, and then in the sublimate solution, so as to avoid poisoning the wound.

The sutures having been introduced, and the edges approximated as closely as possible, the skin is dried, and along the line of the wound is freely sprinkled powdered iodoform. In a few minutes the excess may be washed away, and it will be found that the line of the sutures is covered with an impermeable scab that is insoluble in water. This is known as the "iodoform scab," and may remain until the wound is thoroughly healed. No external dressing is necessary.

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There will be practically no reaction, perhaps only a slight reddening of the area of skin immediately contiguous, and there will be no soreness complained of. I have seen these silk stitches remain in the skin under the scab for two weeks without irritation, and as a matter of fact, they should be allowed to stay for a week. When the scab comes off, which can be accomplished by raising the edge and cutting the stitches, it brings them with it, and the wound is well.

I am well aware that to those who do not follow the antiseptic method closely, this seems a great deal of trouble to take with a small wound, but the end will always justify the means, and the patient will be spared all the soreness that naturally follows upon even a small injury.

If the patient objects to the disagreeable smell of the iodoform, I have found that the iodol will fill every indication, though it does not dry with the same rapidity.

In the larger face wounds, the same treatment has been in many cases employed by me, and even one cutting entirely through the upper lip, has been closed in this way, and the man permitted to resume his work at once without any trouble. The scab, by excluding the air, does away with the great fear in the minds of the laiety as to "taking cold." Of course this treatment is only applicable to wounds whose shape permits of closing without drainage, and all of the skin wounds we meet belong to this class.

ART. IV.—**The Effects of High Temperature in Continued Fevers, and the Best Remedies for its Reduction.**

By E. P. LACEY, M. D., of Dolomite, Ala.

By the term fever is meant that abstract condition which is common to all so-called febrile disorders, and the presence of which gives them their claim to that designation. Essentially, it means undue elevation of temperature, the immediate or proximate causes of that elevation, and the consequences which these conditions entail.—(*Bristowe.*)

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Fever in general is characterized by a combination of disturbances in the physiological processes of the body. Of all the manifold evidences of fever, the elevation of temperature is the one whose cause, range and results have been most carefully and critically investigated. No record of a case in which fever is present is regarded as complete without the chart of the daily variations in temperature.—(*Pepper's System of Medicine.*)

A certain amount of heat is an essential condition for the maintenance of life. Every species of animal has a certain bodily temperature, and any great deviation from this standard results in injury, if not death. Mammalians, whose normal temperature is from 98⅘° to 104° F., become insensible and soon die if cooled down to 64° or 68°, which is the normal standard for reptiles and fish, while a frog is killed if kept in water at 100⅘°. On the other hand, mammalians die when their blood and internal organs are heated up to 113°, which is precisely the normal temperature of birds, and birds are fatally affected when their temperature is raised to 118° or 120° F.

MM. Deluroche and Berger found where animals placed in an atmosphere, ranging from 122° to 201°, until the heat had killed them, had an internal temperature at the time of death of only 11° to 13° above the normal standard. "In every case, the vital functions are seriously disturbed by a very moderate change in the temperature of the bodily organs, and in the mammalians, as a rule, death takes place when this change amounts to an elevation of 6° or 7°."

In man, in febrile affections, the rise of temperature, as measured in the axilla, yields a very accurate criterion of the gravity of the disease. An increase of this temperature from 98⅘° to 100° indicates a mild form of the malady, but an increase to 104° shows that the attack is severe. Above 104°, it is a symptom of great danger; and when it rises to 107° or 109°, a fatal result is almost inevitable.—(*Flint's Practice of Medicine.*)

"The statistics of the hospital at Basle show that of those patients in whom the temperature did not reach 104°, only

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9.6 per cent. died; of those in which it reached or exceeded 104°, 29.1 per cent. died; and, finally, of those in whose axillæ the temperature rose to or above 105.8°, more than half died.

Wunderlich has arrived at very nearly the same conclusions, for he says that the prognosis is very unfavorable when the temperature rises to 106.16°; that the deaths are almost twice as numerous as the recoveries when it rises to 107.06°; and that recoveries are rare when it rises to 107.24°."

What the world needs and demands to-day, are facts and not theories. Can any one, with above statistics before him, assert that febrile high temperature is a sanitary measure, brought into use for the express purpose of consuming bacteria and bacilli? What anxiety is felt by the physician when he sees the temperature range from 104° to 105°, day after day, without any intermission? Does he ignore this, and call it a mere symptom due to a lesion of Peyer's patches, as the case may be? It is certain, in accordance with the laws of force, that no heat is generated save that which is due to direct oxidation, or a correlation of forces. That there is an oxidation of tissue during high fever, I think is proven by the rapid emaciation which often follows it, even where moderate quantities of food are taken. The elevation of temperature which follows muscular contraction can be accounted for by the conversion of force into heat Hence the deduction to be drawn from this—we cannot have undue elevation of temperature unless it be at the expense of muscular tissue, or vital force, and probably both.

It is asserted, by good authority, that the heart, in common with the other muscles of the body, undergoes granular and waxy degeneration. The excess of coloring matter in the urine is said to be due to a too rapid disintegration of the red blood corpuscles. This, I believe, is not proven, from the fact that it is found to be the case in most, if not all specific fevers.

The effects of high temperature on the nervous system

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are not well understood. "One theory which has Liebermeister for its chief supporter, and which has won a tolerably wide-spread acceptance among physicians, is that the nervous symptoms are chiefly a direct result of the febrile temperature. It is impossible, however, for us to regard this view as universally true."

I have seen cases where the temperature was low, accompanied with "low muttering delirium;" and others where the temperature was high, have no delirium whatever. I think we can safely say that high fever has a depressing effect on the nervous system, as any one can remember the languor and inability to make any mental effort during our hot summer months.

On seeing a patient, our first endeavor should be to ascertain his condition, treat that, and not the name of the disease; then we shall have departed from a routine system of practice, which ultimately leads to bad results. We have shown that high temperature is a condition, the tendency of which is towards death, and as conscientious physicians, we should make an effort to obviate that tendency. Fortunately, there are several methods by which this end may be accomplished, but physicians are supposed to select the remedies from which they get the best results.

The cold bath, so extensively used in Germany, appears to have few advocates in this country. It is an old remedy, having been used as long ago as 1787, by Currie, of Liverpool. It possesses undoubted virtues, but it is impracticable in private practice; and is not always convenient in hospitals. Patients often object to it; they "are afraid of taking cold." The temperature falls quite rapidly, but soon rises again, often attaining its former height in two hours. This necessitates six or eight baths per day, which is a tax on a patient's strength, and at a time when he can least afford it. "Intestinal hæmorrhage, perforation of the bowel, and great weakness of the heart's action, are all contra-indications to the use of the cold bath."

Until recent years quinine was regarded as one of the most reliable antipyretics of the materia medica. It has

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been extensively used in all types of fevers, both simple and specific; and if given in sufficient quantity, ordinarily has some effect on the temperature, but the discomfort it occasions is often a contra-indication to its use. It disturbs the stomach, causes a deafness and ringing in the ears, and in patients of a nervous temperament, we are obliged at times to discontinue it. There is a diurnal variation in the temperature, the minimum being reached from 1 to 2 A. M., and that is the time I usually give quinine and attempt to prevent its rise, as I do not believe it has much effect on high temperature. I never administer it in typhoid fever.

"Of the most modern internal antipyretics, the safest seems to be antipyrin when well borne, as it is in the majority of cases; it promotes comfort and quiets the restlessness due to high fever. According to Beyer, it acts by increasing heat radiation, and neither weakens the heart as do kairin, thallin and resorcin; nor does it damage the blood and muscular tissue generally as do the former of these drugs."

If antipyrin does not lower the death rate in continued fevers, it must be due to reckless prescribing, as it meets an indication, the importance of which cannot be overestimated. There is no unmixed good, and if we administer our most useful remedies, regardless of conditions, we may expect to meet with nothing but mortification and disappointment. I have seen but two cases of collapse from the effects of antipyrin, one when an overdose was given to a child by its parents through mistake; the other where the condition of the patient did not warrant its use. I commenced its use soon after its introduction into the United States, since which time I have not lost a case of continued fever. I always administer it in whiskey, which seems to hasten its action and prevents any tendency to collapse. I rarely give it unless the temperature rises higher than 103°. I have given it continuously for four weeks without any perceptible bad effects. In several instances I have discontinued it a day, and compared the patient's condition with the preceding when the antipyrin was given. The difference was so marked as

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to be noticed by the patient and the family, and they invariably ask for the "sweating powder" as they term it. It is more soluble than antifebrin, and I consider it more uniform in its results.

ART. V.—**Oophorectomy done Twice on the same Patient.**

By JOSEPH TABER JOHNSON, M. D., of Washington, D. C.

This subject is one of great interest, especially when, as in this case, it involves the discussion of the propriety of removing the other ovary while the abdomen is open. It has only occurred once in my experience of 80 abdominal operations, that a second operation was done on the same patient for the removal of the "other ovary."

I performed the first operation for the relief of chronic inflammatory disease in Feb., 1887. At this time I examined the second ovary; and expressed the opinion that it had better come out, but objection was made by the attending physician and several visitors, and I left it. The patient was young, and it seemed a great pity to destroy her possible chances of maternity. She was relieved of her trouble apparently for about a year, when she began to have the same symptoms for which she sought relief in the first operation. She was treated by her family physician for several months without relief, and was finally sent back to me. I treated her by various methods, including electricity, for six months; she gradually grew worse, until she was confined to her house a helpless invalid. When she went out she suffered so much as a consequence of the effort, that she was loath to repeat the experiment.

Finally, in compliance with her oft-repeated request, in which her family and physician now joined, I removed her remaining ovary in my private hospital on the 17th November, 1889. She went to her home in the country six weeks later a well woman, and has remained so ever since.

Is it not unnatural to remark that had the other ovary been removed at the first operation, she would have been saved all her subsequent pain, ill health, and the dangers of the second operation? In several instances when I have left the other ovary, the disease for which the first operation

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was performed, has subsequently returned on the other side; and those patients are now invalids, though cured of the disease for which the first operation was performed. It is, of course, impossible to be always sure upon this point, and there may be important reasons why the patient should not be shorn of her power to bear children.

The question raised by the doubtful condition of the other ovary, is one which we ought to have sufficient evidence upon in the near future to decide authoritatively. A few operators have already expressed themselves positively upon this point, and now always remove both ovaries when only one is diseased, if allowed to do so, as a means of protection for the patient.

In September, 1888, Sir Spencer Wells read a paper before the American Gynæcological Society, in which he gave his own experience in ovariotomy twice done on the same patient. In his table of 16 cases he excludes all abdominal sections twice done on the same patient for any other purpose than the removal of a second ovarian tumor, several months or years after the first operation, and which gave no tokens of their presence when the abdomen was first opened.

Sir Spencer was of the opinion that these second operations were demanded in about one in every fifty cases, but he was unwilling to remove the other ovary even when requested to do so by the patient, for the purpose of preventing it from becoming diseased also. He thought it was a moral question—the removal of a perfectly healthy ovary for the purpose of preventing further increase in their families. He says, "If there is no suspicion of disease, I will not remove it." When he has been in doubt, however, he had in some cases removed the other ovary, and in other cases had not; and in these cases some of the young women had had many children, and had not died in confinement.

In the discussion which followed, there was quite a difference of opinion expressed upon this point. Thus Dr. Thomas, among other things, said:

"One lesson can be drawn from these cases, viz., if any

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good excuse can be found for removing the second ovary, when the first ovarian tumor is removed, it is wise to do so whenever there is a true cystoma of the ovary. I mean to say, that if there is not some good reason for leaving it, that it is wiser, while the abdomen is open, to remove the second ovary. This has been my practice for some years, and I have not yet had reason to regret it."

In referring to the frequency of the second operation, Dr. Thomas thought them much more frequent than stated by Mr. Wells. He could recollect six cases in his own practice; and probably there had been more. "I should say that the return of the cystoma in the other ovary was so frequent, that one was called upon to remove it, unless there was a good reason to do otherwise."

Dr. Goodell said that Dr. Thomas had expressed his views so fully, that he had very little to add. He had acted for some years upon this plan. He added:

"At this moment I can recall only two cases of return of the disease in the sound ovary, but the intense disappointment and mental agony which these women suffered I cannot forget. After the second operation, one died and the other lived, but the mental strain on the survivor has upset her nervous system. This experience influenced me in coming to the conclusion to remove the second ovary whenever I could find a decent excuse for it."

Dr. Hunter had operated for the removal of a second ovarian tumor in three cases, and agreed with Drs. Thomas and Goodell in regard to the propriety of removing the second ovary after the climacteric, but thought "it a very serious question before, and often hesitated whether to do so or not."

Dr. Kelly said, "The rule under these circumstances should be: never remove the ovary unless it be manifestly diseased." On this point I think no one advocates "the removal of perfectly healthy ovaries." Mr. Wells says, with some vigor, "If there is no suspicion of disease, I will not remove it." It is only in cases where there is considerable suspicion of disease that its removal is advocated. In such cases, I think our duty to the patient demands its removal, provided, of

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course, the case has been fully stated to her beforehand and she desires it, if the ovary is found already diseased.

In cases past the menopause, and when the tumor is or appears to be malignant, I should always recommend the removal of the other ovary.

The same might be said in regard to patients suffering from insanity, epilepsy—and probably some other hereditary diseases—even if it appeared sound.

The difficulties of a second laparotomy should not be overlooked. Where the incision is made through the old cicatrix, one is quite liable to meet with adherent abdominal viscera. Thomas and Wells both refer to the presence of adherent intestine to the underneath portion of the old wound, and they recommend great caution in making the second incision.

In my case, the tissues were greatly changed, and I was much longer in getting into the peritoneal cavity in the second operation than the first.

In the first section, I had observed the precaution which I now always adopt—viz: to carefully spread out the omentum over the intestines, and thus prevent their contact with the edges of the wound.

Mr. Wells says: "The performance of ovariotomy twice on the same patient must be unusually interesting to Americans; for, as the first real ovariotomy was performed in Kentucky by McDowell, in 1809, so the first time the operation was performed for the second time on the same patient was in Pennsylvania, by Atlee, in 1861. The patient had been operated on in England by Clay, of Manchester, sixteen years before."

His first case was in 1862, the first operation having been performed by Baker Brown, only eight months before.

At the sitting of the Berlin Society of Gynecology, held in May, 1887, a paper, by Martin, on the repetition of laparotomy on the same woman led to an interesting discussion, which may be found in the first part of the fifteenth volume of the *Zeitschrift für Geburtshülfe und Gynäkologie.*

Mr. Wells, in his paper, considers only the question of per-

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forming *ovariotomy* twice on the same woman, while my paper refers to a case of *oöphorectomy* done twice on the same woman. The subject, however, is one which has a much wider range of usefulness than is indicated in either of our papers. Thus it will be seen that Martin, Olshausen, and other speakers at Berlin, have included a great variety of cases in their remarks on the repetition of laparotomy on the same patient—(1) Even when the scarcely united wound is re-opened to admit of the escape of fluid from the peritoneal cavity, or to drain—that is called a laparotomy; (2) Or when some obstruction of intestine has led to vomiting, and the usual symptoms, either during the progress, soon after the operation, or at some later period, incision with the intention of removing the cause of obstruction, is classed as a repetition of laparotomy; (3) Or when the cicatrix has, wholly, or in part, become thin, and a sort of ventral hernia has formed, excision of the thin cicatrix and reunion of the abdominal wall, is called a laparotomy; (4) In one case, alluded to at Berlin, as in one of Mr. Wells', the second laparotomy was for the removal of a uterine tumor which had formed after recovery from ovariotomy; (5) In another case, nephrectomy was performed after a successful ovariotomy; (6) In others, myomotomy or hysterectomy was performed after removal of the ovaries had proved to be unsuccessful in reducing the size of, or stopping the bleeding caused by, the uterine tumors; (7) In other cases, the first operation of ovariotomy having been incomplete, part of an adherent cyst or tumor having been left behind, the second laparotomy was performed to complete the first operation; (8) In a few cases—two of Mr. Wells'—in which the pedicle had been fixed by a clamp to the abdominal wall, the remnant of the pedicle had grown to a sufficient size to cause discomfort or anxiety, and the removal of this enlarged portion of the pedicle has been described as a repetition of laparotomy; (9) In some cases of Battey's operation, in which one ovary only has been removed, the other ovary has been afterwards removed, and this may be truly classed as a repetition of laparotomy; (10) Olshausen narrates two cases in which in-

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complete excision of a hydrosalpinx led to repetition of laparotomy. In one of these cases, he operated for a third time. (11) He also refers to a case in which laparotomy was performed five times on the same woman, by five different surgeons, of whom Sir Spencer was one. First, one ovary was removed, then the other, then a third laparotomy was done by a third surgeon. All Mr. Wells did was to release a portion of adherent intestine. Olshausen, the fifth operator, excised "a small hard mass from the place where the left ovary had been removed, but in which no ovarian structure could be discovered." The patient lived a year after this fifth operation, and died of some cause unknown to Olshausen. These five laparotomies were all done within six years.

In our discussion in the Medical Society of the District of Columbia, on the relative indications for the Cæsarean section and craniotomy, in the winter of 1887, Dr. Busey cited cases of the repetition of the Cæsarean operation upon the same woman—in one case, as many as six times; and Dr. Ford Thompson has reported a case in which three laparotomies were performed on the same man—first, for the relief of intestinal obstruction; second, for the better establishment of an artificial anus; finally, for its permanent closure, after the object of first two operations had been accomplished.

Dr. Hartigan read a paper before the same Society upon two abdominal sections upon the same patient within a month, both successful.

Febricide Pills in Pneumonia.

Dr. Jno. A. Reyburn, Resident Physician Medico-Chirurgical Hospital, of Philadelphia, records (*Times and Reg.*, 1890) six cases of croupous or lobar pneumonia, treated in the Hospital during the influenza epidemic with the Febricide Pills (the composition of which is given in page advertisement of the Health Restorative Co., which begins in this number.) One pill was given about once in four hours, aided by hot poultices externally. All recovered in from 3 to 7 days. One case was apparently moribund when admitted, and is recovering from an attack of femoral phlebitis.

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Art. VI.—Some Recent Advances in the Diagnosis and Treatment of Abscess of the Antrum of Highmore.*

By J. H. BRYAN, M. D., of Washington, D. C.,

Late Passed Assistant Surgeon U. S N., Surgeon to the Throat Department of Garfield Memorial Hospital; Lecturer on Diseases of the Throat Medical Department of Columbia University; Member of the Scientific Societies of Washington.

At the last meeting of the American Medical Association, in a paper on the "Diagnosis and Treatment of Abscess of the Antrum,"† I called attention to the fact that this disease occurs much more frequently than has been supposed. In that communication, I reported four cases; since then, my experience has been still further extended by the three cases I have the honor to report to-night.

The accessory cavities of the nose being lined by mucous membrane, continuous with the lining membrane of that organ, are especially prone to a continuation of an inflammation affecting it; and owing to the very intimate anatomical relation which these cavities bear to each other, it is difficult to say which of them is the seat of the disease.

Before proceeding further, let me call your attention to some of the objects found in the lateral wall of the nose, a perfect familiarity with which is necessary to enable us to understand some of the complex symptoms of these diseased cavities.

The three turbinated bodies divide the lateral wall of the nose into the superior, middle, and inferior meatus. Of these, the middle meatus is the most important. The objects to be observed are the hiatus semilunaris, a semilunar groove between the processus uncinatus behind and the bulla ethmoidalis in front, varying in length and depth in different subjects from a mere slit to a deep groove. This groove contains the ostium maxillare, and as it passes upward and outward terminates in a funnel-shaped depression

* Read by invitation before the Richmond (Va.), Academy of Medicine and Surgery, March 25th, 1890.

† *Journal American Medical Association*, October 5th, 1889.

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known as the infundibulum, into which the frontal sinus and the anterior ethmoid cells empty. You will observe that in this meatus we have two openings very close to each other, viz: the natural opening of the maxillary sinus and the opening into the infundibulum. Occasionally, there is a third opening, known as the ostium accessorium of the maxillary sinus, situated below and in front of the natural opening.

The maxillary sinuses will be found to vary in size in different individuals; and frequently, in the same subject, one cavity will be found larger than the other.

Zuckerkandle speaks of dilatation and contraction of this cavity; but there is an anomalous condition which I have not observed noted, and which I think is worthy of record, as it may assist in explaining the obstinacy with which chronic abscess of the antrum frequently resists treatment. In specimen No. 2325 of the Army Medical Museum Collection, prepared by Dr. J. L. Wortman, anatomist to that institution, the antrum of the right side has three openings into the middle meatus. The posterior one is the largest, occupying a position slightly behind the middle of the inner wall, and upon a level corresponding to the lower edge of the middle turbinated bone. The middle opening is smaller, and has a position slightly above and behind the normal aperture. The anterior opening is normal so far as its position is concerned, but it communicates with a deep groove just in advance of the hiatus semilunaris, which leads into the opening of the frontal sinus. By means of this groove, it is possible to pass a probe from the cavity of the antrum directly into the frontal sinus, although, in so doing, it is made to enter the middle meatus first. The natural channel for pus or fluid coming from the frontal sinus would be into the antrum, in preference to the middle meatus.

Of the accessory cavities of the nose the antrum of Highmore is the most important from a pathological standpoint, it being more frequently the seat of disease than the others.

Suppurative inflammation is the form of disease most frequently met with, and the most common causes are an ex-

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tension of the inflammation from a suppurating pulpitis of a tooth, or an extension of an inflammation from the lining membrane of the nose.

According to my own experience, I believe that diseased teeth are the most frequent cause; others, however, hold that the inflammation more frequently has its origin in the nose, either from a direct extension of the inflammatory process into the antrum, or, as Bosworth* claims, by an hypertrophy, or any other pathological condition, such as polypi, that will close the natural opening and pen up the secretions in the cavity.

Nearly all observers are of the opinion that the diagnosis of an abscess of the maxillary sinus is surrounded with considerable, and often insurmountable difficulties. I can recall cases in my own practice in which I have been unable to make a satisfactory diagnosis. Any method, therefore, that will enable us to solve these difficult problems will be gratefully received by all who have these affections to treat.

The symptoms that are laid down as characteristic are found occasionally to be wanting; and some are common to abscess in one or more of the other sinuses communicating with the nose. They will be found to vary according to whether the natural opening of the antrum in the middle meatus is closed or free. If closed, there will be intense neuralgic pains in the affected side of the face; pain on pressure; a crepitating sensation imparted to the fingers, due to a springing of the distended walls of the cavity; and frequently a bulging of the lateral wall of the nose.

When the ostium maxillare is open, there will be a discharge of fetid pus from the nose, unilateral, unless both cavities are affected; varying with the position of the head, and the condition of the nose; flowing forward when the head is bent on the chest, and backward into the nasal pharynx when in the recumbent position.

On examining the nose, pus will frequently be found in the middle meatus, and, upon close inspection, a pulsating

* *Op. cit.*

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light reflex is occasionally seen, such as is observed in perforations of the membrana tympani in suppurating otitis media. This symptom, when present, is regarded by Walb and Schöller as pathognomonic of abscess of the antrum. I have observed it only once, and in that case it was well-marked.

Occasionally, most of the above-mentioned symptoms are wanting, the patient complaining simply of a nasal discharge with a bad odor. Upon examining such a case, the nasal chambers may be found free from pus and in a normal condition.

Moritz Schmidt,§ of Frankfürt, has given us the most practical method of recent times for determining the presence of pus in the antrum—that is, aspirating the cavity through the lateral wall of the nose. When pus is present, it can be drawn off in the small syringe used. He recommends that the inferior meatus be thoroughly anæsthetized with a 20 per cent. solution of cocaine, and by means of a small syringe, somewhat larger than an ordinary hypodermic, with a strong curved canula, sharp at the end, he perforates the lateral wall about the middle of the inferior meatus. I have used this instrument as he directs on several occasions, and I find the bone is much thicker here than is generally supposed, so that, in spite of the cocaine, the operation is quite painful. Instead of aspirating through the inferior meatus, I now make the puncture in the middle meatus just above the inferior turbinated body. Here the wall is extremely thin, and, if the instrument has a sufficiently long curve, it can be made to reach near enough to the floor of the cavity to ascertain the presence of pus. This procedure has been objected to by some on account of the danger of wounding the floor of the orbit. There need be no fear of an accident of this kind if the point of the instrument is carried downward and outward.

There are, however, cases where so trivial an operation as this would be objectionable, especially in weak and hysteri-

§ *Berl. Klin. Wochenschr.*, December 10th, 1888.

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cal women. We may, then, have recourse to the method recently advocated by the late and lamented Voltolini, of Breslau. Voltolini, adopting a suggestion of Czermak for examining the larynx by means of transmitted light, made use of the same principle in examining the cavities of the head. He found the bones entering into the formation of the face and nose were translucent. Instead of using the sun-light, as suggested by Czermak, he made use of the electric light, and found that, in the majority of cases, the bones were sufficiently thin to permit the passage of light through them. He then used the electric lamp to diagnose the diseased conditions of the antrum of Highmore.

The efficiency of the procedure has been testified to by such men as Störk, Gerhardt, Heryng, and others.

Heryng, in an interesting article on the electrical translucency of the antrum of Highmore,* gives a series of cases he was able to diagnose by this means. He advises the use of a small Edison's electric lamp (five volts), attached to a Türk's tongue depressor, and connected with a battery. Before using, the room should be darkened, and the depressor, with the lamp attached, introduced into the mouth. The tongue should be well-depressed before the mouth is closed, for the lamp becomes very hot, and it will burn the patient if allowed to come in contact with the mucous membrane. The current is then turned on, and the maxillary sinuses, if in a state of health, will become illuminated up to the lower eyelids. If, however, one of the cavities is the seat of an empyema, or a solid tumor, that side will remain opaque, while its fellow of the opposite side will be illuminated.

Cysts of the antrum are found to be translucent.

I have proved the translucency of the maxillary sinuses in several healthy subjects; but since I became familiar with this procedure, I have not had an opportunity of trying it in a case of abscess of the antrum. This simple and painless device will assist us to diagnose a diseased antrum, but

* *Berl. Klin. Wochenschr*, September 2d and 9th, 1889.

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it cannot tell us the form of disease present without taking into consideration the accompanying symptoms.

Another aid to the diagnosis of abscess of the maxillary sinus, none the less practical, but more difficult of carrying out, is sounding—that is, passing a small probe through the ostium maxillare; and if pus be present, it will flow out into the middle meatus. To successfully sound the antrum, much depends on the size and position of the middle turbinated body. If it is unusually developed, and overlies the middle meatus, it will be impossible to introduce a probe into the opening of the maxillary sinus, or into the opening of the frontal sinus. Again the size and depth of the middle meatus has an important influence on the success of the procedure.

Hansberg,* of Dortmund, gives the following directions for sounding the maxillary sinus; a small probe is used about 15 cm. in length and 1½ mm. in thickness. The probe is bent 6 mm. from the end at an angle of 110°; then, with the aid of good illumination, the parts having been previously anæsthetized with cocaine, the probe is introduced into the middle meatus, and the opening searched for, care being taken not to wound the membrane, as the resulting hæmorrhage will be sufficient to obscure the field of vision, and render further probing useless. Entrance into the cavity is readily recognized by the resistance offered to the to-and-fro movements of the probe. Pus, if present in the cavity in sufficient quantity, will flow out into the middle meatus upon the withdrawal of the instrument.

There are four operations for the relief of abscess of the antrum, viz: Cooper's, through the alveolar process; Desault's, through the canine fossa; Mickulicz's, through the inferior meatus; and Bertrandi's, through the palatine process of the superior maxilla. In selecting one of these methods, we must be guided by the cause of the abscess; whether it be induced by dental caries and suppurating pulpitis, or whether it has an intra-nasal origin. If pro-

* *Monatschr. f. Ohrenheilk.*, January, 1890.

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duced by disease of the teeth, then the alveolar operation should be selected; the affected tooth, generally the second molar, withdrawn, and an opening made into the floor of the antrum. It frequently happens that the offending tooth has been lost before the patient comes under observation; then the opening should be made in this vacant space. This is best done by means of a drill, or trephine. I prefer the trephine, and have used one with a diameter of 3 mm. This leaves too small an opening, and I believe more satisfactory results would be obtained by the use of an instrument at least 8 mm. in diameter. The opening should be sufficiently large to admit of the ready removal of any necrosed portion of the alveolar process, and to permit of a free drainage.

When the cause is seated in the nose, such as nasal polypi, hypertrophic rhinitis, or a direct extension of the inflammatory process into the maxillary sinus, the operation recommended by Mickulicz, somewhat modified, will enable us to treat the abscess without the removal of a sound tooth, which is frequently a matter of great consideration. Mickulicz advised opening the sinus through the inferior meatus by means of a sharp double-edged knife. The disadvantage of this instrument is that the resulting opening is too large, and the operation is frequently attended with severe hæmorrhage. I have opened the antrum once through the inferior meatus, and used a small burr or drill devised by Dr. J. Solis-Cohen. It consists of an olive pointed burr attached to a small stem, encased in a canula sufficiently large to admit of the withdrawal of the burr after the bony wall has been perforated. The canula can then be left in the opening until the cavity has been thoroughly washed out. The instrument is propelled either by means of an electric motor or a surgical engine.

This operation has the advantage of draining the cavity at its floor, without leaving a large ragged opening in the lateral wall of the nose. Every attempt at blowing the nose aspirates the cavity and keeps it free from pus; and the patient is saved the annoyance of having the secretions

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pass into the mouth; bacteria and food cannot get into the sinus, as in the alveolar operation, and assist in keeping up the inflammation.

Bertrandi's operation is one that should never be resorted to.

The operation of Desault was held in high esteem by some of the older surgeons, but it is not so often used to-day. If the abscess points in the canine fossa, then of course it should be opened there. In severe and obstinate cases a counter opening to that in the inferior meatus can be made by resecting a small piece of bone from the canine fossa, and packing the cavity with iodoform gauze, as recommended by Semon.

After the opening has been made, the cavity should be thoroughly washed out with a warm solution of salt until all signs of pus have disappeared. The invariably accompanying fetor is best overcome by means of a five per cent. solution of permanganate of potash.

Owing to the peculiar shape of the maxillary sinus, and frequently the long existence of the inflammation before it is discovered, the treatment is often very tedious. The cavity should be syringed out, if the inflammation is at all severe, two or three times a day with mild disinfectant solutions. The peroxide of hydrogen and glycozone have acted well in several of my cases.

Friedländer has recently reported a series of successful cases that he was able to cure in the unusually short period of two weeks. He recommends the opening in the inferior meatus, and after thoroughly washing out the cavity he dries it out with an air-bag and insufflates iodoform.

The following is a report of three interesting cases that have come under my observation recently, and as the first case is an instructive one I will give its history in detail:

CASE I.—Mr. D. E. C. consulted me last May for reflex nasal asthma, stating that he had always enjoyed good health up to eighteen months ago, when he was troubled with frequent head colds, which from neglect and exposure increased in intensity until he was forced to seek relief.

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He had frequently facial neuralgia and pain over the bridge of the nose, symptoms of nasal closure, cough, and a constant secretion dropping back into the nasal pharynx. There has been very little secretion from the front of the nose. About four months prior to consulting me asthma commenced, and the paroxysms have increased in intensity. He has lost flesh and strength rapidly, and he is unable to concentrate his attention on his work. The only relief he has had was during a short stay at Key West, Florida.

On examination the patient presented a pale and an emaciated appearance.

Examination of the lungs revealed numerous sonorous and sibilant râles, Heart sounds were normal. Examination of the nose showed both chambers tightly blocked, and the membrane bathed with a thin serous fluid. On the application of a twenty per cent. solution of cocaine, the swollen inferior turbinals contracted sufficiently to enable the middle turbinated bodies to be brought into view, showing numerous small fibro-myomatous polypi springing from them and tightly blocking up both nasal chambers.

The polypi were thoroughly removed, and the middle turbinated bodies cauterized with the galvano cautery. As a consequence of the treatment, the asthmatic attacks were much less frequent and severe, but the cough and post-nasal secretion continued about the same. Owing to the highly nervous state of the patient, it was impossible, even with the aid of cocaine, to make a posterior rhinoscopic examination.

There was considerable hypertrophy of the inferior turbinated body on the right side, which was reduced by means of the galvano-cautery. Upon removing a slough one morning resulting from a cauterization, the middle meatus suddenly filled with thick creamy pus, presenting a pulsating light reflex, such as is occasionally observed in perforations of the membrana tympani in suppurating otitis media.

Upon further examination, the upper second bicuspid and the first and second molar teeth on both sides were found to be absent. There was no swelling of the right side of the face, and no pain on pressure.

The diagnosis of abscess of the antrum having been established, I trephined through the alveolar process about the seat of the second molar tooth, and syringed out the cavity with a tepid solution of common salt. A large quantity of very fetid pus came out through the nose. The

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cavity was washed out twice daily with peroxide of hydrogen and an antiseptic alkaline solution, with the result of greatly diminishing the secretion of pus. After the abscess had been opened the patient felt greatly relieved, the asthma subsided almost entirely, and he was able to sleep the night through—something he had not been able to do for several months. The cough and post-nasal secretion ceased.

About this time, August 1st, I left the city for my vacation, and did not see the patient again until October 5th, when he presented himself again for treatment, stating that during August he contracted a severe cold, which caused a return of the asthma and of the inflammation in the antrum.

Upon examination of the nose, I found the polypi on the left side had re-developed, and they were much larger and more myxomatous in character. There was considerable pus found in the middle meatus after the polypi were removed. As it was impossible to say what its source was, I aspirated the antrum, but did not find any secretion. By means of the probe I was able to determine that there was considerable necrosis of the middle turbinated body present.

The patient was recommended to go to the Garfield Hospital, where a more thorough examination could be made with the aid of an anæsthetic. On November 11th, he was etherized, and with the little finger passed into the left nasal chamber as far as it would reach, I found the middle turbinated bone very friable, breaking down under slight pressure; small spicula of bone were felt high up, projecting across the vestibule of the nose, and probably impinging on the septum.

On the right side the middle turbinated bone was smooth and firm.

With a sharp curette passed into the left nasal chamber, I scraped away all the broken down tissue I could reach. When the patient came from under the influence of ether, the nose was washed out with a solution of bichloride of mercury (1-2000) and insufflated with iodoform. The patient made a rapid recovery, with almost an entire cessation of asthmatic paroxysms. After the parts had thoroughly healed, it was found that more than half of the middle turbinated bone had been removed.

The inflammation in the antrum subsided under the treatment previously adopted. The patient did well until he contracted the grippe, which in his weakened and depressed state of health came near proving fatal to him.

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When last heard from he was much improved in general health, but he has not entirely rallied from the melancholy and depressed mental condition which has been a marked feature of the case from the beginning.

CASE II.—Lieut. ———, U. S. A., consulted me in June, 1889, stating that he was suffering from nasal catarrh, and gave the following history: He has had hay fever every autumn since 1878, except for the three years he spent in South America, where, at an elevation of 9,000 feet, he was entirely free from all catarrhal symptoms. In 1882 he had the right upper second molar tooth filled, and shortly afterwards he had an attack of facial neuralgia, followed by an alveolar abscess. Last 4th of March he contracted a severe cold in the head, and since then he has had a profuse secretion of fetid pus from the right side of the nose.

On examination there was no swelling of the face, but there was some tenderness on pressure. The inferior turbinated body on the right side was dilated, but not hypertrophied. Under the influence of cocaine it contracted sufficiently to allow the middle meatus to be brought into full view. No pus was found there, nor in the post-nasal space.

The diagnosis of abscess of the antrum was made, and as it was dependent originally upon the tooth, he was advised to have the second molar extracted. Before this was done, however, the filling was removed, and a quantity of very fetid gas escaped.

On removal of the tooth its anterior root was found to have perforated the floor of the antrum, and the pulp cavity communicated directly with it.

The alveolar process was found to be somewhat necrosed around the tooth socket. This was removed, and the opening into the antrum enlarged. The cavity was washed out thoroughly with warm distilled water. A large quantity of very fetid pus escaped through the nose. The antrum was syringed out daily with mild antiseptic and stimulating lotions, with the effect of greatly reducing the amount of secretion, but not entirely checking it. There is probably some pocket which is so situated that the applications do not thoroughly reach the inflamed surface. The case is still under observation.

CASE III.—Mrs. C. came under observation in May, 1889, complaining of naso-pharyngeal catarrh and loss of smell.

The condition then was as follows: The middle turbinated bodies were red and swollen; no secretion in either

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nasal chamber. On post-nasal inspection the posterior ends of the middle and superior turbinated bodies and the fornix were bathed with a white secretion.

She complained of the great annoyance from the secretions dropping back into the pharynx.

The middle turbinated bodies were cauterized with chromic acid, with the result of greatly reducing them in size and improving the sense of smell. She then passed from under observation, and I did not see her again until November 30th, when she stated that the sense of smell was improving, but the quantity of post-nasal secretion was greater than formerly. Inclining the head forward caused the secretion to flow from the nose, which she thinks is confined to the left side. Her husband and children complain of a bad odor of her breath.

I made frequent examinations of the nose, but could not find any secretion in the cavities. The post-nasal was about in the the same condition as previously described. The teeth were in good condition, only one or two having small amalgam fillings.

Not being able to say definitely what was the source of secretion flowing from the nose, I aspirated the left antrum through the middle meatus, and drew off about two drachms of a sero-mucous fluid.

The diagnosis made was a catarrhal inflammation of the antrum, complicated with a catarrhal inflammation of the posterior ethmoid cells and of the sphenoidal sinus.

As the patient objected to losing a tooth, I determined to open the antrum through the inferior meatus with Cohen's nasal drill.

On December 17th she was put under the influence of nitrous oxide gas, and I perforated the antrum just anterior to the middle of the inferior meatus. The drill was withdrawn and the canula left in the opening until she came from under the influence of the gas. The cavity was then syringed out with warm distilled water; but as there was some hæmorrhage following the operation, it was impossible to say what the character or quantity of the secretion was. The hæmorrhage ceased in a short time. The next day the patient expressed herself as greatly relieved; the secretions into the post-nasal space and from the front of the nose had greatly diminished.

The antrum was washed out daily for ten days with a mild alkaline solution through the opening in the nose, at the end of which time, all secretions from the cavity seem-

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ing to have ceased, the treatment was discontinued. There still remained a diminished post-nasal secretion, which gave the patient very little annoyance.

In conclusion, the points to which I would respectfully draw attention are:

1st. The disease is a serious one, and, owing to the absence of positive signs, it frequently goes unrecognized for a long time.

2d. That with the aids to the diagnosis mentioned in this paper there can be no reasonable excuse for not recognizing its presence.

3d. In many cases the easiest and simplest method of treatment is to open the sinus through the alveolar process; but when the cause of the disease is intra-nasal, the opening made in the inferior meatus by means of Cohen's nasal drill will offer many advantages over the alveolar operation.

806 *Seventeenth street.*

Art. VII.—Selection of Remedies.

By THOMAS P. GARY, M. D., of Ocala, Fla.

Ambition for distinction, the hope of profit, and the advancement in pharmacy, with over-crowded competition, are constantly co-operating with a laudable desire of doing *good*, to bring forth new remedies, or new modifications of old ones; and invention is tortured, not more in the production of the novelty, than in the collection or creation of plausible evidence in its favor.

If we consult our works on Materia Medica, we find a vast list of medicines and preparations, more or less different from each other, recognized as remedies by those high in authority, and given to us as guides to treatment of diseases. What is to be done a few centuries *hence*, if this list shall go on increasing in the same ratio? We must leave this puzzling question, with many others, to the decision of

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posterity, whom they especially *concern*. For us, it is sufficient to bear our own burden, and to take care that its magnitude does not overwhelm us.

It must be obvious to every physician, that if we discard the majority of remedies given to us to select from, as useless, it will still be necessary to make a cautious selection out of the *remainder*, in order to bring it within a manageable compass.

The young physician, who has, as yet, had but little *experience*, will necessarily be guided, to a great extent, by the recommendations of older heads, or by the dicta of the medical author in whom he may happen most to confide; but it is desirable that every one should, in some measure, be enabled to form a *judgment of his own*, and not surrender himself to an exclusive dependence, which may have a favorable or unfavorable issue, as *accidents* may determine the character of the authority upon which the dependence is placed.

Being a physician of some thirty years' experience, I may be able to supply a few hints, which will enable the young physician, in the exercise of a suitable degree of independence, in his selection of medicines.

All are aware that every country has an authorized standard, called a Pharmacopœia. That of the United States professes to give a list of all the substances, either in their crude state or prepared, which are necessary to the practice of medicine in this country. This was originally prepared, after a due comparison by eminent physicians from various parts of the United States; and it has since, on various occasions, undergone a most careful revisal, in which reference was had to the prevailing opinion of medical and pharmaceutical practice throughout the whole country. It is, to say the least of it, much more likely to afford a just rule for the guidance of the young physician, than the decisions of any single individual, however distinguished he may be in the profession.

We do not wish to restrict the reader to our national standard for his remedies, for that would be demanding a

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subserviency incompatible with that freedom of thought and action which is essential to any improvement of our *therapeutics*, and even to the most efficient exercise of known methods of cure. But, *as a general rule*, the young practitioner will be most safe in not going beyond the limits of the Officinal Catalogue until a judgment, matured by experience, shall enable him to estimate duly the character of newly-asserted or revived pretensions. He will assuredly find, in this Catalogue, abundant materials wherewith to operate in his first practical attempts. Its copiousness, indeed, is much beyond the necessities of ordinary practice; and he will, by no means, be exempt from the duty of a careful selection, even should his field of choice be strictly limited by *its authority*, for it is the object of true medical science to render the art of prescribing as positive as possible. Then, it is advisable always to seek, in the medicines you select, an energy proportionate to the character of the disease, and especially to avoid the habit into which too many fall, of resorting to the most powerful on every occasion.

There is a class of practitioners who seem to look upon diseases as the stoics did upon sins—as all equally heinous. No sooner do they catch a glimpse of something suspicious in the distance than they conclude at once that it is an enemy; and, without estimating his strength, prepare to crush him by the most energetic measures. Happily, this disposition is less prevalent than formerly, and, in our section, has, in a great degree, left the regular profession to seek a refuge among empirics.

What I mean is, that the *character* of the medicine, and its *dose*, should be regulated by the nature of the disease—that we should treat mild cases by lenient and persuasive measures, and launch our *big doses* only at the refractory and the violent.

From what has been said, it will have been inferred that, while, on the one hand, I would avoid the untimely use of powerful medicines, or of exaggerated doses, I would reject everything not possessed of certain well-ascertained powers,

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or useful properties, and would, above all things, eschew the practice of *heaping* together discordant or ill-understood materials in one empirical recipe. I would, on the other hand, strenuously advise the physician to make himself acquainted with as many medicines, of diversified properties, as he has the opportunity to study and the capacity to store away in his memory.

There is a strong leaning in human nature towards what is *new*. This is peculiar to no age, country, or condition. Let a scheme of physical improvement be proposed; we seize the idea with eagerness, and dash on head-long with it, taking the bit between our teeth, and utterly disregard the guidance and the restraints of prudence. Let a novelty in philosophy, or science, or religion, or medicine, be started, and, true or false, we swallow it with avidity, allow it, half *digested*, to enter the vital current, and then, by the force of our thousand hearts, send it circulating through every portion of the system, either to be thrown off by our healthy energies, or to become incorporated in our structure, and henceforth to form, as the case may be, a wholesome or noxious part of the constitution. You cannot look around you for a moment without being made sensible of this fact.

I will cite a few instances. Without going further, I will point to the exaggerations, magnetism, mesmerism, phrenology mind-cure, clairvoyance, spiritualism, faith-cure, etc.; in philsophy and science; to Mormonism in religion, and to homœopathy and hydropathy, in medicine; not to speak of that tornado of *pills* and potions which is raging at this moment, with an almost unexampled fury, through the whole land.

It must be clear that this restless love of what is *new*, while it is producing much good, is working also no inconsiderable amount of evil. It is true that we are reaping the intellectual and physical advantages of a quick reception and rapid circulation of moral and scientific truth wherever it may first come to light; but have we not also *circulated the poison* with the nutriment, and are not our judgments weak-

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ened, our morals tainted, and our mental habits *vitiated*, by familiarity with the outpourings of European folly and vice —not to speak of the corruption which is generated in our own moral body, and circulated with the rest?

It is true that we have become familiar, in medicine, with the numerous and most valuable truths which the last half century has developed; have learned to see the secret workings of disease within the recesses of the breast and heart, and have received the inestimable gifts of a great number of valuable remedies, too numerous to mention; but have we not also received error along with truth? Have we not felt the influence of false doctrine in every vein and fibre, and do we not still feel it counteracting the wholesome workings of the efficient and the true? And do we not behold, every day, patient after patient dropping out of the hands of regular practitioners into those of mere pretenders?

It may be asked, are we, therefore, to reject all that is new? Are we in all instances to decline the good, lest we receive the evil along with it? Certainly not, but we should endeavor to control this inordinate love and eager search of mere novelty. Instead of taking a thing to our bosom *because* it is new, we should receive it at first with suspicion, and should make its novelty a reason for a close and sifting examination of its character. When a stranger presents himself to us, do we receive him at once with open arms, introduce him into the midst of our families, give him access to our dearest treasures, and thus open, perhaps, to fraud and villainy the path to his evil ends? Do we not rather ask for his credentials, and then afford him a fair opportunity for proving his worth before bestowing upon him our whole confidence? So it should be in our choice of medicines.

There are few things in which we are more apt to be led astray by the love of novelty than in the choice of medicines. All the most valuable and best-tried instruments of our art are but too apt to fail in obstinate cases of disease, and, even where success is probable or certain in the end,

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they are too often slow. In our extreme anxiety and impatience, we are ready to catch at any aid that is confidently held out to us; and as most new medicines or preparations come recommended by a never-failing success in the hands of their introducers, we are not without seemingly reasonable hope of advantage from them. In addition to the mere inducement of novelty, we have the uneasiness, under a heavy responsibility, and the fear that we may leave some possible means untried of acquitting ourselves well in the almost fearful charge entrusted to us.

Many yield to these influences, and make an eager trial of the *new remedy*. Perhaps accident and those various circumstances which very frequently conspire to produce a false conclusion as to the efficacy of a particular treatment may work in its favor, and we may thus, from a partial experience, acquire a confidence which may lead to its further and more extensive employment, until the tide of fortune changes, and repeated failures at length conduct us back to a just estimate of its value.

The continuance of the same causes leads subsequently to similar results. With each newly-proposed remedy we run the same round of promising trial, partial success, and ultimate disappointment; and the consequence sometimes is that, drawn off from established methods of cure in pursuit of these "*ignes-fatui*," we find ourselves as unsettled in practice and opinion, distrustful of the *old*, without having acquired confidence in the *new*, and almost ready to surrender in despair all reliance upon the efficacy of medicine.

Let me, therefore, strongly urge always, in the choice of medicines, to lean decidedly towards those of established reputation. Do not neglect the old, tried servants of your professional fathers for the crowd of younger applicants for your favor, whose only claims are a new face, a good deal of pretension, and a list of recommendations from persons you do not know. But at the same time I am far from wishing to confine one to the paths before trodden, and to close the access to something higher than we have yet attained. Well-regulated efforts to widen the circle of the useful are

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highly laudable. What I wish to impress is, that you should not adopt a medicine *because it is new;* that we should, in fact, consider its novelty as a ground of suspicion, and that we should admit it into confidence only upon strong and trustworthy recommendation and after a strict examination into its merit.

I have only one other limitation to propose in your selection of medicines. Never, under any circumstances, employ those of which the composition is *kept secret.* Such medicines will be constantly urged upon your notice with the highest pretensions. The manufacturer will offer them to your acceptance, and *humbly beg, for a time,* either in the hope of subsequently obtaining your recommendation, or at least with the intention of making use of your name. Your patients, yielding to the solicitation of friends, or prompted by their own secret hopes, will press you to permit or authorize their use. But steel yourselves against all such solicitations, and resolve that your hand at least shall not be the one to fix a stain upon the fair fame of your profession.

You may justly ask the reasons for such a positive rejection of remedies of asserted value. Is it not obvious that so long as their nature and preparation are concealed, you can have no such certain knowledge of their mode of action as to justify you in their employment to meet any given *indication?*

It may be argued, on the opposite side, that we are equally ignorant of the precise composition of many other well-known remedies as they come from the laboratory of nature; that the secret medicine in question may have been so frequently tried under every variety of circumstances, that in relation to its physiological and therapeutical effects it is as well known as those of legitimate character, and that we have no right to reject offered means of relief to our patients, however irregular these means may be. But the answer is clear: that a substance produced by nature, even though its composition may not be known, can always be relied on as identical, if obtained under similar circum-

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stances and treated in the same manner; while, in relation to the secret medicine, you can have no such confidence, as its mode of preparation depends upon the caprice or varying views of an individual not always of the best character; and even though one parcel of it may have been profitably employed under certain circumstances, you can have no satisfactory proof that another parcel will have the same effect.

But there are other and higher grounds for utter rejection of such medicines. By allowing yourselves to be drawn into their use, you would give to unprincipled men the opportunity of citing your example as a rule for others. No matter how careful you may be in employing the nostrum to confine it within perfectly safe limits, no sooner will you have touched the vile thing than the fact will be proclaimed. Wherever your name has influence you will be emblazoned in advertisement and heralded in placards as its indiscriminate patron; and thus, even against your wishes, be made an instrument for extending its general reputation and establishing it in the public confidence. After this, it will be in vain that you may disclaim your asserted favor. You cannot but acknowledge that you have used it, and all else you may say will be ascribed to professional or personal jealousy, and will tend still further to benefit the *empiric*, by the opportunity it will afford him of exhibiting himself to the public as a persecuted man. Under these circumstances, would not your first inconsiderate step be answerable for a proportion of all the mischief which may arise from the misapplication of the medicine?

It is highly important, therefore, to keep yourselves strictly within the regular limits. Exceed these, even though in a slight degree, and you lose all control over the results. You cannot calculate the evils which may flow from one false step. I do not speak thus as a mere matter of course, but with a strong sense of the duties of our high calling and of the imperative obligations of every member

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of the profession to avoid doing anything which might degrade its character and limit its sphere of usefulness.

In conclusion, I will say you should ever be mindful of your duty to your *patients* and the responsibility to your brethren in the profession.

ART. VIII.—**The Increase of Venereal Diseases.**

By D. M. CROSSON, M. D., of Lewiedale, S. C.

How strikingly alarming and easily discernible to the vigilant observer in the practice of medicine is the increase of the loathsome venereal diseases and the many aches and pains attributable thereto; and how drifting and degrading to the proper physiological and hygienic condition of the human family, to say nothing of the pathological condition of the numerous victims of this increased vice, which was styled in former days "youthful imprudence," but now makes such broad sweeps that it could appropriately be termed *old ones' folly!* And it is as everlasting as it is a noted precocity of past and present generations.

This is especially noticeable to one making the treatment of these diseases a specialty, or to one who sees them in daily practice. These diseases, truly speaking, are gonorrhœa, with its complications—epididymitis, orchitis, stricture, gleet, etc.; chancroid or false pox; and chancre or true syphilis, with all its phases and stages.

They are contracted by actual contact, or are hereditary, and are not contracted, as I have often heard, from "lifting railroad irons," "striking the cart-wheel," or "from water-closets"; and they certainly have their telling and baneful effects, as a far greater degree of the numerous troubles and pains we have to treat could be traced back to this origin, if we could get a correct family history of each and every individual history. Yes, these diseases, which are looked upon by the aristocratic element of our country with disrespect and shunned as a leper, are no respecters of persons, and can be seen in all grades and conditions of society;

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and they are very often too little regarded by not only the unfortunate ones, but many practitioners regard them of but little consequence, and palm off syphilitic subjects, not warning them of the danger of not being properly cured. They are often forgetful of the fact that many are anæmic, scrofulous, rheumatic, neuralgic, and have other excruciations that human flesh is heir to, and are not mindful or aware that the origin of many of their troubles is active or hereditary syphilis. And how numerous are the mothers that watch their babes, as they fret, whine, sicken, and die; and as they follow with sorrowful and aching hearts each one carried to God's acre, near the white church, and laid beneath the sod, and over which they erect the white marble slab, and wonder why God, in the dispensations of His providences, has visited them so often and afflicted them so sorely! They are not aware or mindful of the fact that it is attributable to the "youthful imprudence" of a syphilitic husband and father, or of their own sexual folly.

These diseases have existed since the days of Job, and the historical traditional line shows that there has been no material lost.

But these are diseases, and are increasing; and, being such, demand the notice of physicians, for they are as amenable to treatment as other diseases. The practitioner that does not relieve his syphilitic subject in the first stages of his trouble, or lightly regards his disease, or does not warn him of the danger of not being properly cured, or of the danger of the transmission to offspring, is unworthy of the name of M. D., and is behind the age.

I would not be understood as saying that syphilis is the origin of all our varied diseases, which are so well known, ably treated, and relieved; but I do say that venereal diseases are on the increase, as is shown from the monthly mortality list of different large cities and from my own observation in practice.

The mortality list for one month in the city of Knoxville, Tenn., showed a record of one-eighth of deaths recorded from syphilis; and this is equally true of other large

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cities, and the increase is great in the country—so much so, that a large planter remarked to me the other day: "Doctor, I believe over one-half of the negroes in my employ are affected more or less with syphilis." This I believe to be true; and I here assert that, from experience, I believe that there is but little consumption in the *pure negro race*, and that so much of the so-called phthisis pulmonalis among black negroes is nothing more or less than a *syphilitic tubercular trouble* in the *pulmonary organs*, and the *majority* of such cases will *yield to specific treatment*, which would not *destroy* the true *tubercular bacilli*.

It is in the hands of potent practitioners and the medical profession to stay the increase of these diseases. Venereal diseases are easily cured, but not by every one that claims the name of physician; and I am sorry to say that I have often seen, after long delay, the ill effects of maltreatment. Many a poor fellow has groped out the balance of his days *worried to death* from an *ardor urinæ*—from an everlasting stricture—caused by treatment in the old heroic way—by strong injections—doing more harm than good. And many have soon seen the ill effects of their physician telling them that he had so quickly cured them of a bad case of syphilis after cauterizing the chancre and not regarding its constitutional effects. But, alas! how soon is the trouble seen in the subject himself, and is transmitted to generations to come!

Venereal diseases are all amenable to treatment, and are easily cured; but no syphilitic subject ought to marry under two years from the time of the contraction of the disease, and not then if he wants to be sure of the non-transmission to offspring, unless he has had the proper treatment.

The treatments for gonorrhœa and its complications are numerous, including medicines and electricity, and when properly applied always effect a cure and leave no bad effects. The treatment for syphilis is specific—mercury and the iodides—which always yield good results when timely and properly administered.

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Clinical Reports.

A Bloodless Amputation.

By HUGH STOCKDELL, M. D., Petersburg, Va.

Ex-Member Medical Examining Board of Virginia, Etc.

The case, briefly reported below, afforded me a new experience, and is, therefore, considered worthy of publication; but as we are told there is nothing new under the sun, I dare say there are others of our profession who could report a similar case if they thought it worth while.

Munford Walker, æt. 25, a colored brakeman employed by the Norfolk and Western R. R. Co., on the 19th of February, had in some way his left foot crushed by the train on which he was said to be stealing a ride to Petersburg. The accident occurred at Wilson's Depot, about thirty miles above, between 4 and 5 o'clock in the afternoon. He was brought here on the same train, and was without surgical aid, until, say, 11 o'clock that night, when Dr. Budd and I met at his bedside. He seemed to be in a condition of shock, but soon rallied under the influence of stimulants and a hypodermic of morphine and atropine, and we proceeded to amputate above the ankle-joint. Esmarch's bandage and tourniquet were used, and there was scarcely a drop of blood lost in the operation, which was reasonable enough. But, to our surprise, after removing the tourniquet, there was still no bleeding, and we could find no vessel to ligate; so, after waiting some time, there remained nothing to do but to close the flaps and put up the stump as under ordinary circumstances, taking care to instruct an attendant in the use of the tourniquet, should it become necessary, as I confidently expected it would be, in the "wee sma' hours" following our departure. But there was never, at any time, more than the slightest discoloration of the dressings, and the case progressed rapidly to recovery, and was discharged well in about three weeks.

I give only the facts in this case; let another furnish the explanation.

Have prescribed Tongaline frequently for the complaints for which it is recommended, and have found it very reliable in its action.—J. W. Vance, M. D., St. Joseph, Mo.

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Two Cases of Chills and Fever treated with Nitrate of Potash.

By J. D. HUNTER, M. D., of New Orleans, La.

In the February number, 1890, of this Journal, I called attention to some original observations pointing to the value of nitrate of potash as a remedy for certain cases of chills and fever. I wish to add reports of two additional cases—one successful and one a failure.

I visited, on Sunday at 2 o'clock, a railroad engineer who was attacked with chill and fever, in the State of Mississippi, the preceding Thursday. Chills occurred daily about 12 o'clock each day, continuing about one hour, followed by fever which lasted eight hours. I found the patient with high fever; temperature 104° S. L. Gave ten grains antifebrin; profuse perspiration and lowering of temperature to 99° followed. Fever rose again at 4 o'clock; temperature at 8 o'clock 103°. Fever continued as heretofore until 10 o'clock. Then I ordered forty-five grains potassii nitratis to be given at 10 o'clock next day, and a similar dose whenever symptoms of chill might be felt; but no chill took place. At 10 o'clock the succeeding day, forty-five grains of the salt were again given, with instructions to take a similar dose on the occurrence of a chill, but no chill occurred. The patient was permitted to resume his occupation on Thursday, with instructions to report.

(In two other cases, also railroad men, indentical with this, the paroxysms were shortened, but a cure was not effected).

A gentleman from New York contracted chill and fever while on the Isthmus of Panama. Failing to obtain relief, he came to New Orleans for treatment. Chills occurred on alternate days, followed by fever of ten hours' duration, and exhausting sweats. He found relief from quinine and arsenic, but relapses were frequent. So confident was I of success that I promised a speedy cure. I gave thirty grains *potassii nitras* two hours preceding chill; another dose when chill occurred. In this case no beneficial result followed. The chill, fever and sweat, were of the usual intensity and duration. Sixty grain doses given in the same manner on the next alternate day, resulted in a like failure. Interrupted the chill with quinia and oil of black pepper in large doses. Patient is now upon this treatment.

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Chill and fever are of unusual occurrence in New Orleans, consequently the field of observation is limited. The majority of the cases treated by me were from the country, and were of long standing. At least four-fifths of the cures effected were in cases of a chronic character, which did not yield to quinine or arsenic. Failures may be expected in recent cases.

352 *Common Street.*

Case of Ear Disease in Patients Suffering from the "Grippe," or its After-effects.

By LAWRENCE TURNBULL, M. D., of Philadelphia, Pa.

Aural Surgeon Jefferson Medical College Hospital.

These cases were adults, men and women, but few children; with severe otitis media suppuration, involving the middle ear, being affected during the three months of December, January and February, with but few in March.

The ear symptoms develop usually in from five to fifteen days after the acute naso-pharyngeal symptoms, which are accompanied by coryza dysphagia with cephalalgia, or neuralgia involving the frontal sinus or supra-orbital nerve, and sometimes the brain. In a few cases there is a cough, with more or less aphonia. The progress of the otitis is rapid, with spontaneous perforations of the membrana tympani, in from ten to twelve days, presenting a ragged appearance. In some of the earlier rare cases, there was liquid serum in the middle ear cavity.

Paracentesis was performed with a cataract needle under anæsthesia of a warm solution of cocaine, one-fifth; then cleansed with hot boric acid solution. The perforation was treated with boric acid solution, menthol, and cosmoline, one-twentieth, applied with a mop of absorbent cotton, and large doses of quinine for the neuralgia.

Another class of cases had pain and suffering in and about the mastoid cells, with deafness involving the middle ear and the naso-pharynx, which were treated with a spray of warm solution of borax and carbolic acid, every second

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or third day. The Eustachian tube was catheterised, or Politzer's air douche used with or without hydrobromic ether, with recovery from the deafness.

Four Cases of a Peculiar Neurosis Occurring in Children.

By BERNARD WOLFF, M. D., of New York, N. Y.

RESIDENT PHYSICIAN SHELTERING GUARDIAN ORPHAN ASYLUM, NEW YORK CITY.

I desire to place on record the notes of several cases which have come under my observation, directly or indirectly, and which present conditions to which I am able to find no analogue in the literature of children's diseases which I have at my command. The cases appear unique, in that so far the writer has been able to find no efficient cause to account for the phenomena presented, and no points suggestive of the true pathology. The ordinary cases of so-called "cerebral irritation" occurring in childhood, where the digestive function plays such a prominent part, are so often symptomatic of disturbance in the alimentary canal, or the emunctories, that one is accustomed to turn thither for an explanation; yet in this regard the histories of the following cases give an entirely negative result:

CASE I.—Adolph C., aged 4 years, November 1st, 1888; family history unknown; child is robust and well nourished. He awoke in the morning in his usual health, and continued bright during the day. At about 5 P. M. the nurse noticed that the child's face was flushed, and that he seemed to be suffering from some mental excitement. This condition was progressive, and at 6 P. M. the patient became delirious. He assumed a belligerent attitude, and would strike out wildly on being touched. His speech was broken and incoherent. He was soothed and put to bed and slept one hour; he awoke and seemed confused, then rapidly became delirious again. Pupils dilated, tongue, mouth and throat dry; pulse vigorous and rapid; temperature 99° F.; face flushed; restless and intensely fretful. When disturbed would cry, but would not shed tears. Could not walk, unless supported, and seemed fearful of losing his equilibrium. The child continued two hours in this condi-

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tion. Bowels were opened with enema of glycerin and warm water. Morphia sulphate gr. 1-16th was given subcutaneously. The patient was finally quieted, and slept fairly well during the remainder of the night, arising next morning bright and well, and with no recollection of what had passed.

CASE II.—Hannah C., aged 12 years, January, 1889. The symptoms in this case, with proper deductions for temperament and individual complexion, were very similar to those in Case I. The patient's previous health had been good. She was found roaming around the ward during the day. She would walk in a given direction, avoiding obtruding objects as for some fixed purpose, and would then turn off suddenly in another direction. Her speech was wild and incoherent. She listened to questions with a great show of attention, but would make nonsensical and irrelevant answers. She would make out as if eating, as though there was food before her, and would go through the most grotesque gestures, as though flourishing a knife and fork. She would laugh heartily and then break off suddenly into a serious mood. She was sensitive to pain, but the impression was transient. Complete recovery resulted on the second day, but no note was made of treatment beyond the use of warm water injection and negative result.

CASE III.—Julius L., aged 5, during August, 1889, was found at night sitting up in his crib and vainly trying to get out, apparently unaware of the wire frame-work around the bed, against which he would throw himself with great violence. He was very spiteful, and would spit and scratch when any attempt at handling him was made. He was sensible of painful impressions, and would cry lustily, but would not shed tears. He was unable to speak or act intelligently, though he seemed to have some vague idea of his surroundings, and would make a show of obeying commands. His heart's action was very rapid; no change of temperature was noted; pupils were dilated. Hot-water bath failed to quiet him. An enema of glycerin and warm water was given, which was followed by a large, loose evacuation, which seemed to afford considerable relief. After an hour or so the child went to sleep and slept until morning, when he was entirely well, and has continued so up to this time.

CASE IV.—Englehardt S., aged 6, August, 1889. This case presented no features markedly differing from the preced-

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ing. Delirium was gay and joyous, and the patient seemed intensely amused at the airy phantoms conjured up by his distempered imagination. He was continually babbling to himself, and plucking at his face and hair. An enema was given, which brought on a movement. Bromide of potash and calomel, together with min. iij of chloroform, were given in a teaspoonful of sugar. Restlessness gradually subsided, and the patient sank into a fitful sleep. Next morning he awoke fully conscious, but somewhat dull and apathetic. Since then he has been in excellent health, and has had no further symptoms.

In all these cases there was dilatation of the pupil, a rapid heart's action, delirium, with a tendency toward an alternation with a condition resembling stupor. There was at no time any nausea, vomiting, or any evidence of a digestive derangement or irritation in the intestinal tract, except in one case, where there was constipation, but not marked. The exhibition of enemata, however, afforded relief in two of the cases, which would seem to have its significance. In the other two cases, on the contrary, there was no appreciable benefit.

I have called the condition which I have described in these reports *cerebral irritation*—an indefinite term, it is true; but I do not wish to commit myself to any definite theory as to the true nature of the trouble until I get more light on the subject. Doubtless it might be suggested, as a neurological refinement, that this central functional disturbance was connected, as a remote result, with a peripheral irritation from a congenital phimosis, with an adherent prepuce. But this is confronted with the fact that the patients were circumcised Jews. The girl, also a Hebrew, had a free præputium clitoridis and a normal sexual system, as far as discoverable.

Again, had these been conditions of somnambulism or somniloquism, the treatment resorted to, and the self-inflicted pain, would assuredly have been sufficient to awaken the patients from sleep, be it never so profound.

These cases appear interesting from their occurrence in previously robust and healthy children, with no heart le-

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sions and no cranial deformities; from the obscurity of the etiology; and from the peculiar features in the symptomatology.

I am indebted to Dr. R. B. James, of this city, for the use of his notes on Cases I. and II.

150*th Street and* 11*th Ave.*

Original Translations.

From the German. By MOSES D. HOGE, Jr., M. D., Richmond, Va.

Absorption of Arsenic.

For some time past Paschkis has conducted experiments to see if arsenic is absorbed when suspended in oil or rubbed up in a salve for cutaneous uses. Two grains of pure arsenic in oil were injected under the skin of a dog, and the next day it could be detected in the urine, and three days later it was found plentifully in the fæces, followed by diarrhœa, and fourteen days later the animal died. At the *post mortem* was found gastritis and nephritis. After the epidermic application of arsenic with lanolin, it was also found in the urine and fæces, but not followed by death. Paschkis has employed it very successfully on three patients suffering from psoriasis vulgaris with the happiest results.—*Rundschau*, 1, 1890.

Some Accidental Effects of Antipyrin.

In spite of the fact that antipyrin has been so extensively and often used with good effect, still there are many unlooked-for manifestations which have caused Drasche (*Wien. Klin. Wochen.*) to give it careful consideration. Frequently there is vomiting, occurring at once or after several hours, affecting females oftener than males; it has been observed, after clysters containing antipyrin, showing its reflex origin. Israel reports two children who, after medium doses, had hæmaturia and convulsions, ending fatally. Of especial interest is the exanthema (in about ten per cent. of the cases), occurring most frequently in typhoid or phthisical patients, generally disappearing in three or four days after discontinuance of the drug. Profuse sweating, lasting many hours, with great fall of blood pressure and body temperature has been reported. Fits of sneezing, lasting a long time, and great depression, has been noted. In re-

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gard to the urine, a light ischuria, tenesmus of the bladder, and involuntary discharges of urine have been observed. It increases the specific gravity of the urine, and albumen is frequently found.

Suspension Treatment for Chronic Spinal Meningitis.

A man thirty-four years old, who had undergone much bodily fatigue, was taken sick with a violent cold, pain in the lumbar region and legs, soon followed by weakness of sight and genital functions; pressure on the spinal cord caused pain. The lower extremities were paretic with a diminution of all the sensibilities. With this patient de Renzi (*Centralbl. f. Nuer*, 2, 1890) used the suspension treatment, and saw, after a few applications, an improvement in the subjective and objective symptoms.

Treatment of Soft Chancres (Chancroids).

The striking results obtained by Winckel with liquor ferri sesquichloridum in puerperal ulcers induced Letzel (*Allg. Med. Cent. Zeitung*, 1890,) to try it on soft chancres. After the ulcer has been painted with the solution for four days, a bright granulating surface results, which is then treated with calomel, and usually heals in five days. The pain caused by the application very seldom calls for cocaine previously.

Proceedings of Societies, Boards, etc.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

March 11th, 1890.—**Hæmaturia.**

The appointed Leader, *Dr. John N. Upshur*, said we must bear in mind that hæmaturia is a symptom, and not a disease. Success in the treatment depends on an accurate diagnosis of the source of the trouble. Blood that may be mistaken for hæmaturia may come from the uterus, it being common to have blood flow into the vessel from the vagina while a woman is menstruating. He had recently attended a woman suffering with dysmenorrhœa, who had vicarious bloody discharge from the bladder. Again, the show of blood may come from the bladder itself, or the ureters, or the kidney. It may come from the prostate gland, or it may be the result of excessive sexual indulgences. When the hæmorrhage comes from the kidney, it is said to have a smoky appearance. Another source of bleeding is in pur-

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puric conditions of the blood, or in malarial disease. When the bleeding is due to the gouty diathesis, and when sharp crystals of oxalate of lime, passing through the pelvis of the kidney, or down the ureters, are the cause, he had found the tincture of guaiacum a most efficient remedy.

Mr. Hugh Blair gave accounts of several cases of hæmaturia occurring within his knowledge. Col. ——— was attacked with severe hæmaturia. Several physicians were in attendance. The usual course of iron and astringents was used to no purpose. A friend sent him five gallons of Ponce de Leon water, and the use of it was successful. A subsequent attack wasr elieved by the same water. This water has been used frequently in this city—sometimes giving relief, but oftener failing to do so. Some years since, the virtues of tincture of guaiacum were asserted by a member of this Academy, and, as a consequence, it has been used, sometimes with success, and as often failing. A physician, near this city, had a lady patient in advanced life, who had been troubled with hæmaturia for more than a year, who was relieved, and permanently relieved, with the first dose of tincture of guaiacum. Mr. ————, of this city, had hæmaturia very decidedly, went to New York on business, and, consequently, his disease was aggravated. He was promptly relieved by his physician with ten grains of calomel. Cream of tartar is a favorite remedy with the same physician, who has used it with frequent success. He also uses cream of tartar in various forms of hæmorrhage—amongst others, in hæmoptysis. While these remedies, and others, have been successful, we know that they all sometimes fail, and there is no one medicament that is applicable to all kinds of Hæmaturia. Ammonia-iron-alum, gallic acid, sulphate of iron, dilute sulphuric acid, and various astringents, are the chosen medicines of Dickinson, Beale, Golding Bird, and other eminent English authors in hæmaturia.

Mr. Blair detailed the methods of diagnosticating between hæmorrhage that comes from the bladder and that from the kidney, and remarked that the most skillful acknowledged themselves sometimes incapable of accurate diagnosis. A case submitted to him for urinary examination showed many prisms of triple phosphates in acid urine. It was plain that the crystals were wounding the kidney, and treatment directed to the removal of the crystals by increased acidity of the urine was successful. The same diagnosis and treatment in two other cases was successful.

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Among the causes of hæmaturia are entozoa, cachexia, neoplasm, calculous deposits of several kinds, and obstruction in any part of the abdominal viscera. Malaria is capable of producing dyscrasia, and also secondary obstruction, in the liver, spleen, and kidney. Two specimens of malarial hæmorrhagic urine were sent to him for examination by the late Dr. Cox, of West Point, Va. Neither specimen contained blood corpuscles. Dr. Cox did not regard the hæmorrhage, but gave a large dose of quinine, and the patients were relieved.

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A writer from the South, some time ago, in the *Virginia Medical Monthly*, said that the quinine treatment in his section, to be successful, must be combined with a mercurial.

What has been said relates to hæmorrhage from the kidney. Hæmorrhages from the bladder and urethra belong rather to the province of the surgeon than the physician.

Dr. Wm S. Gordon said that he rose only to a point regarding the treatment of hæmaturia, particularly in such patients as appear to be in average health, and in whom the cause of the hæmorrhage had not been ascertained. Golding Bird had laid stress upon the law of endosmosis and exosmosis in administering remedies for the control of renal hæmorrhage. In this condition the remedy must be given, as a rule, in a solution, the specific gravity of which is less than that of the blood, as endosmosis occurs under such conditions, and the solution at once enters the blood; whereas a concentrated solution would cause exosmosis into the gastro-intestinal tract. Cream of tartar, largely diluted, acts as a diuretic; but, in concentrated solution, as a purgative. Hence the good results obtained oftentimes, in hæmaturia, by the use of alum, and other waters referred to by Mr. Blair.

Dr. Wm. W. Parker said that it must not be supposed that clotted blood, when passed, must necessarily come from the bladder. Some fifteen years ago, in jumping from an overturned buggy, the wheel struck him in the back and ruptured some portion of his kidney. The bleeding did not take place till the third day after the accident, when, in attempting to pass his water, he discharged, through a No. 1 catheter, nearly a quart of partially coagulated blood. It continued to flow for three or four days, and gradually subsided entirely. It left the bladder, however, in a great state of irritation, that lasted two years in spite of treatment, hot baths at the Springs, etc. The passage of the instrument gave him very little pain. He always passed it himself, and

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he does not think the subsequent irritation was caused by it, but by the presence of blood in his bladder for three or four days. The trouble increased to such an extent that the rectum sympathized, and he found he would be ruined for life. Could neither control his bladder nor rectum. He finally asked his tailor to make a flannel garment for the hips and back, such as was used in the Crimean war to prevent dysentery. The tailor suggested that the doctor get another pair of flannel drawers and cut off the legs. From that day Dr. Parker had no return of irritation either of bladder or bowels. He has acted on this fact, and cured permanently quite a number of cases of chronic irritable bladder, especially in women. After the use of injections of nitrate of silver, he has urged the use of double pair drawers for the winter months. He has worn his in winter for three years.

He has been attending a case of anæmia in a girl seventeen years old for six months, and nothing seems to do her any permanent good. She suffers with violent headache, and it is only relieved by a large dose of quinine two or three hours before the attack, or by ten grains of antipyrin. She has not menstruated for seven months. At one time, her feet and limbs swelled, and he found dropsy. Her appetite is tolerably good, considering all things. She seems to hold her own, but sleeps very little. Her pulse has been at about 120 for six months. The mammæ have shrunken, and are now very flat. The girl's character is good. Tate calls this kind of anæmia, "The anæmia of good-looking girls," and says they generally get well.

He has long been trying to get this girl to go to the country and spend her time in the open air and in the sunshine, and hopes to get her off in a few days. Tate recommends this treatment very earnestly. He thinks some of the cases are caused by the arrest of development in the uterus, or blighted pregnancy.

In closing the discussion, Dr. Upshur called attention to the fact that transportation of urine, which required time enough for an alkaline reaction to take place, resulted in the destruction of the red-blood corpuscles which it contained, and the production of the condition known as hæma-globinuria.

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Analyses, Selections, etc.

Knee-Jerk or Tendon Reflex—How to Test It.

Thomas Buzzard, M. D., F. R. C. P., London, in a most instructive lecture delivered February 6th at the National Hospital for the Paralyzed and Epileptic, London, on "The Diagnostic Evidence Afforded by Tendon Reflex in Diseases of the Nervous System," states as his belief that "absence of knee-jerk is always pathological. This must not, however, be construed as an inference that more serious symptoms of disease of the nervous system are necessarily approaching." Yet various observers have put on record that the knee-jerk has been absent—not from a pathological cause, but as a natural or physiological peculiarity—in a percentage of large numbers of individuals examined, which has varied in the experience of different observers from 1-25th of one per cent. to nearly five per cent.—a discrepancy carrying with it sufficient proof of a very large amount of error of observation.

Within the last few years a mode of examination has been introduced which is calculated to reduce this source of fallacy to a minimum. Dr. Jendrassik's method is to direct the patient, seated on a table with the bared legs dangling, to link the bent fingers of one hand in those of the other, and pull energetically as though endeavoring to tear them asunder. Whilst this is being done the ligamentum patellæ is struck. One thousand men of different ages, partly sound and partly sick (recognized cases of nervous disease being excepted) were examined, and the state of the knee-jerk observed. By the ordinary method 9 showed very weak reflex; by the Jendrassik or arm-tension method the contraction in these was always strong. The jerk failed on one side in six; in these it was also weak on the other side; on both sides the contraction could be easily brought out by the arm-tension method. In 16 cases the reflex could not be got out on either side by the ordinary method. Out of these sixteen, in fifteen he succeeded by the arm method in evoking the reflex, whilst in one he completely failed, but this was a patient with diabetes, in which disease examination shows that the reflex is frequently absent.

A method to which Dr. Buzzard drew attention several years ago is very convenient, and its advantage probably depends upon the same principle as is concerned in the

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Jendrassik mode—viz: a state of artificially increased muscular tension. The patient (seated) is directed to plant his foot firmly down at such a distance that the leg forms a little more than a right angle with the thigh. Whilst the observer rests the palm of his left hand upon the patient's thigh he strikes the ligamentum patellæ about an eighth of an inch below the knee cap. The quadriceps muscle can be felt, and if the skin is exposed can be seen to contract more or less vigorously in response. He constantly employs this method in the first instance in the case of females, as no disturbance of the dress is required—the contraction of the muscle where the response is present being plainly felt through it.

But this method, like all the others, is not infallible, and requires checking. As a rule, a percussion hammer is the best means of evoking the reflex; in a small minority this will entirely fail, and then it will probably be found that the ulnar edge of the hand or some still thicker implement will succeed. The method of Jendrassik is calculated to reduce to a minimum the chance of error, and should always be employed before it is finally concluded that the knee-jerk is absent in a particular case.

To make a mistake on this point is now of much more consequence than it was when it used to be believed by some that in a considerable percentage of the healthy the knee-jerk is naturally absent. His opinion is, then, that if the most careful examination fails to elicit the knee-jerk (there being no structural change or peculiarity about the knee-joint itself to interfere with the process) we have to do with something of pathological import.

Examination will then usually show that there are no other symptoms which serve to confirm this opinion. But this is not always the case. It is possible that absence of the knee-jerk may stand alone as evidence of some organic change, either of a temporary or permanent character. After diphtheria, for example, absence of this reflex may be found as the only objective symptom. It is then but temporary in duration.

Or examples of permanent absence may be found. In a brother and sister, of a family of children numerously affected with Friedreich's or hereditary ataxy, the brother presents, like most of the others, the ordinary symptoms of this singular affection, amongst others absent knee-jerks, ataxy of gait, impairment of speech, and lateral curvature of spine. The girl, on the other hand, who is much

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younger, shows as yet only one symptom—absent knee-jerk. The others will doubtless follow, but at present there is nothing peculiar to be discovered in her except the absence of this reflex. Now, this appears to me to be a very important fact, and suggests the necessity of inquiry into the family history of a person who, without any complaint of illness, is found to have no knee-jerks. In such a case as this, the key to the mystery is to be found in the state of the other children. But if absence of knee-jerk may thus stand alone as the solitary symptom of diphtheritic paralysis and also of Freidreich's ataxy, it may also on occasions be the only symptom of a disease like tabes dorsalis, possibly, but by no means necessarily, to be accompanied later on by other signs of the disorder.

In general terms, absence of knee-jerk signifies organic lesion either of muscle, peripheral nerve, or of the grey matter of the spinal cord in its lumbar enlargement. It may, however, result, though only as a temporary condition, from an epileptic fit, an apoplectic seizure, or the action of certain narcotic agents.

Adherent Vesical Calculus—Clinical History and General Considerations.

Dr. A. Martinez Vargas, of Madrid, Spain, Professor of Diseases of Children in the University of Grenada, etc., reports (*Archives Pediatrics*, April, 1890,) a case of adherent calculus in the mucous membrane of the bladder—a fact the possibility of which is denied by some eminent writers—demonstrated after the operation by inspection of the marks of attachment covering almost one-third of the calculus; and, after its extraction, the adherent grains of sand were felt with the finger incrusted on the mucous membrane of the bladder. The child was three years and three months old. When two years old (April, 1888) the first symptoms of vesical calculus occurred. Several soundings always found the stone in the one place. Lithotomy in June. After the forceps had caught the stone, decided resistance to extraction or even displacement from its attachment was experienced. After the stone had been extracted (weight about 75 grains), both the operator and his assistants felt the loosened remnants of stone, as if grains of sand, which were removed as far as practicable with the tip of the finger. The bladder was then washed out with a four per cent. solution of boric acid, and the Guyon sound (or catheter) was left in in order to secure drainage and avoid

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hæmorrhage. In the afternoon the urine came out slightly colored. A mixture of bromide of camphor and benzoate of sodium was given. Signs of peritonitis occurred during the afternoon. Belladonna and mercuric ointments and flax-seed poultices were applied to the abdomen; drainage tube was removed; boric solution injection was continued every three hours. Urine flowed through urethra on second day. On third day peritonitis subsided, and patient cured by eleventh day. The composition of the stone was urates of ammonium and sodium, with carbonate and phosphate of lime and some oxalate.

In his search of the literature on the subject, he has been able to find only twenty-six cases, including the one he is now recording. As to diagnosis of the condition, it may be suspected if, on entering the catheter just within the bladder, a roughness is felt always at the same point, which roughness cannot be moved by position of patient or by pushing upon it with instruments. The stone, in such cases, cannot move towards the entrance of the urethra, thus closing it at times. Besides, hæmaturia does not result from adherent stone. A small lithotrite, under antiseptics, should then be passed and made to catch hold of the calculus; and if no movement of the stone follows, then we may know adhesion exists. Besides, an endoscopic examination will confirm the diagnosis.

"Litholapaxy appears to be the perfection of surgical art; for, without causing the least injury, it satisfies an indication which formerly was only possible by an operation perilous, as is always the perineal or suprapubic lithotomy."* But vesical stone is not always propitious to litholapaxy; in fact, adherent stone is a positive counter indication. Cystotomy is preferable in such cases to all other operations. The incision above the pubes should be large enough to admit both the finger and forceps. The danger of peritonitis is lessened by this manipulative removal of adherent stone. After the removal of the stone, the surface of adhesion on the mucous membrane should be dressed with weak solutions of nitric acid, in order to prevent any

* We had thought the bugbear of fear as to suprapubic operations had become a thing of the past The records of McGuire and other surgeons during the last few years – since McGuire has taken so prominent a part in revival of suprapubic cystotomy—make us wonder why it is that the operation, so simple, perfect in results, and safe to the patient, should have been allowed to sleep so long, when it is needed almost every day —*Editor Va. Med. Monthly.*

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grains of sand which may remain from afterwards becoming the nuclei of other stones.

Conclusions.—1. The clinical history of this child shows evidently that vesical calculi can be adherent to the mucous membrane without having anything to do with the encystment.

2. It is characteristic of such cases that there is no obstruction of the urine; in micturition there is no hæmaturia; there is great resistance in the extraction of the stone; grains of sand stick to the bladder after the stone is extracted; a marked cavity or facet is observed on the stone; and finally, the commencement of peritonitis immediately after the operation.

3. The frequency of such cases appears very rare, according to the statistics of 7,477 cases tabulated. In my opinion this rarity is due more to the indifference of surgeons in looking for it than to the fact.

4. Adherence of stone has not been recorded until the sixteenth century, and from the beginning of this century until the present date twenty-four cases, including his own, have been registered.

5. None of the theories given interpret fully the stone of his patient; for want of such he gives the following: The colloid materials accumulated in the vesical spot, irritated by the calculus, keep united the bladder and the stone for a considerable time, long enough to form the precipitation and conglomeration of the urinal salts, resulting thus in a solid and definite adherence. Children who have not begun to walk favor this state of things.

6. Remembering this case, in the future surgeons ought to determine without doubt if a stone is adherent, and not be content with a simple diagnosis which does not determine this fact, because there is always means of discovering the truth.

7. Litholapaxy is counter-indicated.

8. To extract an adherent stone it is necessary to perform lithotomy; the suprapubic lithotomy is preferable, because the perineal cannot avoid the violent dragging and the injury of the bladder nor of the peritoneum.

Treatment of Infantile Diarrhœa.

The treatment of this summer trouble of nursing babies is now recognized to take its inspiration from the parasitic origin of the disease. Most authors insist on a strict antiseptic treatment, and, first of all, efforts must be made to

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prevent the penetration of the germs into the digestive tubes of the infant. The careful washing of the nurse's teat with antiseptic solutions, and the same of the nursing-bottles, only in stronger solution, and sterilization of the milk used, is already a regular practice, and washing out the baby's mouth each time it nurses is another good habit. The treatment itself must attempt to destroy the pathogenic germs which are the cause of the malady. Two drugs are used—napthaline aad calomel. The first must be given in a mixture that does not contain any fatty matter. The following formula is given:

℞. Napthaline (pure)..... 1 gramme;
Mucilage acaciæ .....
Chamomile-flower water, āā...40 grammes. M.
Sig.—Give a teaspoonful every two hours (shake well).

Or it may be given in rectal injection as follows:

℞. Napthaline. ..... 1 gramme;
Aquæ destill.....50 to 100 grammes.

Boil this until it looks milky, and add boiling chamomile-flower water, 500 to 1000 grammes. Stir well and allow it to cool down to 37° C. (98½° F.).

To prevent the administration of napthaline causing any poisonous accidents, no substances must be allowed to remain in the intestines that can dissolve it (fats mostly).

According to the recent experiments of Baginsky, when calomel and napthaline are given together, all the bacteria that resist the first are destroyed by the second, throughout the whole intestinal tract.—*Arch. Pediat.*, April, 1890.

Treatment of Whooping-Cough with Antipyrin.

The author agrees with Geffrier, Jenser, Solenberger, Friedländer, and others, in the value which they have placed upon antipyrin in the treatment of whooping-cough. The drug acts upon the essential elements of the disease—the catarrh, the specific character, and the nervous element; but the author was induced to use it on account of its depressant action upon the nervous system. He has used it in ninety four cases, and in seventy-one the effects were very appreciable. Under old methods of treatment a serious case of whooping-cough lasted forty or fifty days; under the antipyrin treatment, it has been reduced to eighteen to twenty-five days. Not only has the duration been lessened, but also the gravity and frequency of the paroxysms. No accidents were observed in the au-

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thor's cases, and no injury from the treatment was evident in those cases which were complicated with broncho-pneumonia or capillary bronchitis; a cutaneous eruption, lasting a few days, occurred in two cases, and in several others there was gastric disorder, which might have been caused by impurities in the drug. The dosage should be thirty centigrammes to one gramme daily for children from one to three years of age and two to four grammes for older ones. It may be combined with Vichy water and some aromatic syrup.—*Le Concours*, March 16, 1889—*Arch. Pediat.*, April, 1890.

Paralysis and Progressive Atrophy of Lower Extremity Due to Severance of Nerves at Origin.

In some very interesting "Professional Observations in New York," Dr. O. B. Will, of Peoria, Ill., tells (*Peoria Medical Monthly*, February, 1890,) of the following remarkable case, which was operated on (with probable recovery) by Dr. John A. Wyeth, Professor of Surgery in that most excellent College for Graduates—the New York Polyclinic:

A man was brought into the Polyclinic suffering from paralysis and progressive atrophy of the left lower extremity, due to severance of the popliteal and peroneal nerves directly at the point of their origin from the great ischiatic, in the upper part of the popliteal space. The man was, during last harvest time, in front of his reaper sicle, when his team took fright and ran. He quickly recognized his danger, and thought to add to his safety by at once throwing himself on his face and permitting the machine to drag over him instead of cutting off his legs. The blade was set too low, however, and struck him just above the knee-joint behind, cutting off the nerves as described, and mutilating the leg frightfully, although missing the artery, which was laid bare, aud then jumped over him, doing little other damage. A local physician in his own village washed out the wound, and finally succeeded in getting it healed, but there was, as before stated, complete paralysis, with consequent trophic changes, and the man was sent to New York. Prof. Wyeth made an incision through the integument and underlying tissues the whole length of the popliteal space, and even far up into the thigh, whither he followed, and succeeded finally in finding the end of the ischiatic nerve, which had been drawn far up between the muscles. It was a most thorough dissection, and made a fearful-looking gap. The ends of the popliteal and peroneal were likewise chased

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and found. The ends of all these nerves were nicely and smoothly clipped, and their fresh surfaces brought together and evenly and accurately adjusted and held in position by stout ligatures passed through each at the distance of one-quarter and one-eighth inch from the ends. The wound was closed, the leg placed in extreme flexion, and at last accounts the patient was able to move his leg and toes, and gave promise of entire restoration. It was a most magnificent illustration of reparative surgery, and a source of pride and gratification to the operator.

Choice of Anæsthetics.

Dr. O. B. Will, of Peoria, Ill., says (*Peoria Medical Monthly*, February, 1890,) that "It is beginning to dawn upon even the most thoughtless, that dangers other than of a directly fatal character lurk in the wake of the administration of anæsthetic substances and compounds. The finest and most instructive, as well as logical discourse I ever heard on this subject was delivered by Prof. Gerster at the New York Polyclinic Medical School. He holds that, in the first place, no physician should ever confidently assure his patient that there is absolutely no danger in the administration of anæsthetics. He can assure him that the risk is small, but that there is always danger, more or less, is beyond cavil, and no physician is justified in assuming, even for the purpose of pacification, that there is none. A drug that renders man helpless and unconscious, prevents æration of the blood, and weakens the heart's action, is necessarily dangerous. Not only that, but there are specific irritating qualities that leave an impress on different organs detrimental to their functional welfare and disastrous to the systemic health. Prof. Gerster thinks that the craze manifested in the eastern cities of the United States for ether alone, as an anæsthetic, is harmful in the extreme. He holds that while it may barely lay claim to fewer immediate deaths through its indiscriminate administration, it is more hurtful in its after and remote, or indirect effects, than is chloroform. The latter he considers, in the main, less harmful to the functional integrity of the several organs of the body than is ether. The only notable exception and contra-indication to its use is organic or functional heart-disturbance. Of course its administration, as that of any other anæsthetic for that matter, demands the attention of a trustworthy and intelligent medical man; one who knows how to proportion the proper admixture of atmospheric air, and is ready and able to de-

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tect the slightest variation in the circulation, respiration, and reflex activity of the optic muscular system. Chloroform is more dangerous than ether, simply because it is more powerful and must be more closely watched. The stimulating influence of ether cuts but a small figure when complete anæsthesia is produced. The only element of greater safety in the administration of ether, then, is the fact that it is less powerful, and its influence more quickly withdrawn when heart-failure is imminent. It is therefore, under such circumstances, to be preferred. But there are conditions under which its administration outranks chloroform in danger two to one. In Bright's disease, or other irritating malady of the kidneys or urinary passages, or in conditions of bronchitis or any other irritated condition of the air-passages, ether is often simply murderous in its effects, and the patient's chance for subsequent health, if placed in the balance, would be found wanting. There is no greater mistake made to-day than the blind adherence to ether alone as an anæsthetic by the profession of the East. The Professor closed his remarks on this subject with some eloquent words, in which he again referred to the exclusive use of ether in the seaboard cities of this country, while in Germany, France, and the Western and Southern United States, chloroform was more nearly given its true position, and thanked God that in thus freely expressing his honest convictions he enjoyed the best of company.

Treatment of Abortion.

Dr. T. Gaillard Thomas, in a Clinical Lecture (*Annals Gyn. and Pædiatory*, March, 1890,) says that we will assume that the abortion cannot be prevented. Under such circumstances, it is no more right to stop its pains than it is right to stop the pains of labor at full term. In the treatment, be just as antiseptic as you would be in labor at full term. In abortion, the uterus "moults" its mucous membrane as a bird its feathers; the decidua vera flakes away. While the uterus is throwing off this dead tissue, what better culture material for bacilli can it have than that here existing?

The anus is constantly discharging fæcal matter, which is septic to the last degree. German bacteriologists declare that a common source of puerperal infection is found in the ostium vaginæ of the patient. If this be so, it is necessary that the vulva be thoroughly cleansed, first with soap and

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water, and then bathed thoroughly with an antiseptic 3 per cent. solution of carbolic acid.

As an illustration of this fact, the following instance may serve as a guide to you in such cases:

Some years ago, I was called to a lady some ten miles out of town, suffering from true puerperal septicæmia. The attending physician did not know of any cause for this trouble. He had no case in his practice at that particular time from which he could carry the infection. His hands, instruments—everything was all right. The nurse, too, was thoroughly aseptic. Everything, all around the room, was in good condition. But the water-closet was in the room adjoining the one in which the patient lay. It was one of those old-fashioned pan-closets that has been aptly described by Col. Waring, the great sanitary engineer, as "whitened sepulchres, fair without, but foul within." I lifted the pan, and the odor that came up was indescribable. Here was the solution of the problem that puzzled the doctor. The patient had been infected by the exhalation from this closet. His patient had been in labor for twelve hours, and during this period she had made frequent visits to this closet to evacuate her bladder and rectum. She sat upon the seat of this closet, and during the act of defecation the labia are rolled out. At each effort they are pushed out still further, and the foul emanations that proceeded from the closet had been bathing the parts concerned in parturition. Through this channel they gained admittance into the system, and probably set up that violent septicæmia from which she was suffering.

This fact is well worth bearing in mind, and, more particularly, as you will not find mention made of it in any text-book on obstetrics or gynæcology, as far as I know.

The moral to be drawn from all this is that you should never permit your patient, either during labor or parturition, to sit on a water-closet which communicates with a sewer, or allow her to use anything but the ordinary chamber-pot or commode. The inconvenience arising from this is nothing compared with the serious consequences that may effect your patient from a neglect of this precaution. Go to any of the best hotels of this city, and you will find the same pernicious arrangement that I have just referred to prevailing there even at this day.

We have in abortion a hæmorrhage, usually going on all the time. If I were to ask the members of this class for a remedy for whooping-cough, every one would give a differ-

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ent remedy, but if I were to ask a remedy for malaria, you would all say quinine; and for syphilis, you would also all give one remedy. Why is this so? Simply that where there are a hundred remedies for one disease, it may be taken for granted that we know very little of the nature of that disease; but when we are all agreed upon a single remedy for a given disease, we know a great deal about that affection. Now, I want to give you *one*, not several, different remedies, for the hæmorrhage of abortion. This one remedy is the *tampon*.

To stop that hæmorrhage, is the one and only indication to be fulfilled in the beginning; and when you have done this thoroughly, you have done your whole duty to your patient.

After you have put in the tampon, what then should you do? Give a dose of opium to quiet your patient's suffering? Yes, if you want to do her as much harm as you can. Bear in mind this one fact, that these pains are what you want; and, by attempting to stop them by opium, you are like one running a race with a ball and chain tied to your leg. Are you to give ergot, then? No; the os is not dilated as yet, and as ergot acts by contracting the muscular fibres of the uterus, you would be simply striving to drive a large fœtal mass through a contracted os. Give a styptic? No; if you put in an efficient tampon, no hæmorrhage can follow; and if the uterus at the fourth month is filled with blood by its use, no harm can accrue to your patient.

To make the tampon—Take a mass of cotton and tear it into say twenty-five or thirty smaller pieces; then make a 5 per cent. solution of carbolic acid. Now, take the cotton, and put it in the solution and boil thoroughly. You will have treated that cotton with two of the best antiseptics I know of—hot water and carbolic acid.

To apply the tampon—Place your patient on a table by the side of the bed in Sims' position. Then, stuff well both the anterior and posterior cul-de-sac and the cervix as well, with iodoform gauze, if you have any. Then, having thoroughly saturated the cotton with the carbolic solution, fold a towel, and, putting the piece of cotton between the folds, slap it with your hands until you have forced out of it all the fluid you possibly can. Then take this piece of cotton and pass it on your forceps through a Sims' speculum against the iodoform gauze that you had previously introduced, and repeat this process till you have reached the lowest portion. Take a piece of dry cotton now and push

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it into the vagina so as to hold the others in place. All the upper half of the vagina is thoroughly aseptic.

I am accustomed, when I remove such tampons, to swab out the cervix uteri and vagina as a new tampon is put in place. I then take a bit of absorbent cotton and thoroughly swab the vulva with a 3 per cent. solution of carbolic acid. I next place a towel, squeezed out of the carbolic solution, over the vulva, and apply a bandage so as to hold the towel in position. This prevents the entrance of bacteria from the anus and any access of air. In swabbing the vulva, be cautious about using a bichloride solution, as eczema sometimes results from its use.

After some hours, from twelve to twenty-four, take out the tampon, being guided in this by the pain of the patient, and you will then, in the majority of cases, have brought the abortion to a successful termination.

Aristol in Dermatology.

Aristol is among the latest additions to the list of remedies used in dermatological practice. It is an amorphous reddish-brown powder, insoluble in alcohol, glycerine and water, and but slightly soluble in ether and the fixed oils. It is odorless, and possesses the great advantage of not being absorbed; hence, no toxic symptoms follow its use. It is made by mixing a solution of iodine in iodide of potassium, with an alkaline solution of thymol. It is claimed to be especially valuable in tertiary syphilitic ulcerations. It is especially serviceable in lupus, varicose ulcers, and in mycotic diseases. In psoriasis its action is rather slow. In tuberculosis of the skin it will prove a succedaneum to iodoform. The experiments made with it so far have been very successful in the diseases mentioned, but disastrous when applied to chancroids. A good general formula for its use is as follows:

℞—Aristol.....3j.
Adipis benzoati.....3ix.
M.—Ft. ung.

It may be used stronger if the indications require it. Care should be taken to keep it in black glass bottles, as light decomposes the aristol.—*St. Louis Clinique, March*, 1890.

Sodium Salicylate Taste.

The St. Louis Medical and Surgical Journal states that the taste of sodium salicylate can be masked by dropping a pinch of cooking salt on the tongue just before taking the drug, and allowing it to dissolve thereon.

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Methyl Chloride as a Local Anæsthetic.

Dr. Ernst Feibes, in the *Berl. Klin. Woch.* (*Brit. Med. Journ.* Oct. 19), draws attention to the extensive and successful use in the Paris hospitals of methyl chloride as a local anæsthetic. It (CH_3Cl) is a colorless, easily liquefied gas, with an odor resembling that of ether or chloroform. The readiness with which the gas liquefies adapts it for convenient use, as it can be stored in a siphon or a bottle of any kind specially constructed to conduct heat badly. It may be applied to any surfcce directly from the siphon, or as a spray, but this method is objectionable, owing to the anæsthetized area not being in most cases sufficiently circumscribed. Bailly uses the following method, which he calls "stypage": Tampons composed of cotton-wool, surrounded by a layer of flock silk and then covered with thin silk, are saturated with methyl chloride and applied to the part by wooden or vulcanite holders. After contact for some seconds the part gets pale and anæmic, and diminishes in sensitiveness. If the tampon be then removed there is marked reaction, shown by congestion and slight itching; but if the application be continued for a few seconds longer the skin assumes a white, dried, parchment-like appearance. This is the time to operate. If you proceed further superficial necrosis may result. The application is sometimes succeeded by itching and an uticaria-like eruption. It is employed in all kinds of small operations, circumcision, opening abscesses, and in neuralgia, lumbago, muscular pains, gout, etc. In scraping lupus it is best applied by means of a camel-hair brush, as special parts can then be anæsthetized with perfect precision.—*Chicago Med. Times*, March, 1890.

Transplantation of Rabbit's Bone in the Treatment of Ununited Fracture.

Every surgeon knows how difficult it is in certain cases to get a broken bone to heal by bony union. The ends may be pegged and hammered and sutured indefinitely without success. In the case of fracture of the radius there are oftentimes special difficulties, since resection—the last resource of the surgeon—leaves a gap between the ends of the radius, which is now shorter than the ulna beside it, and so it is almost impossible to bring the bared ends of the fractured parts into apposition and to keep them there. Even if a piece be cut out of the unfractured ulna, so that the inequality in the length of the two bones be removed, a

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satisfactory result cannot always be obtained. In the *Lancet*, October 26, 1889, Professor McGill, after commenting upon the above facts and relating his failure with the last-mentioned procedure, explains a new method which he applied successfully in one case, taking the hint from a suggestion made by Dr. MacEwen, who proposed, in case of destruction of the shaft of the humerus by acute necrosis, that a new shaft should be secured by transplantation of bits of new bone.

In professor McGill's case, a man, twenty years of age, had fractured both bones, so that the ends of the radius protruded through the wound on the radial side of the forearm. The ulna healed quickly and well, but the radius remained ununited, although the ends had been refreshed and wired three months after the accident. Some eight months afterward he came to the hospital. He had a scar over the wound, and the ends of the radius were quite movable, the usefulness of the forearm and hand being much impaired. An Esmarch's bandage was applied, and an incision was made in the line of the old scar. The ends of the bone showed no signs of union, but were rounded and covered by a thick membrane-like periosteum. When this had been filed away, an interval of three-quarters of an inch was left between the fragments. This interval was filled with thirteen pieces of bone, each about one-sixth of an inch in length, chiselled from the femur of a freshly-killed rabbit. The bones were not wired. The skin-wound was tightly stretched, without drainage, with catgut. Firm pressure was applied by means of salicylated wool and bandages, and the forearm was placed on an anterior splint. There was no suppuration and very little discharge. The patient left the hospital in six weeks, with the bone firmly united. Three months later the injured arm was as useful as the other.

Is it not possible that this method used by Professor McGill may be of service in the treatment of old ununited fractures in other parts? It is possible that a more vigorous action might be set up, by presence of the implanted healthy bone, than would naturally occur in the fragments of a fractured long bone in a person of feeble constitution.—*Canada Lancet.—Cincinnati Lancet and Clinic*, March 1.

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Book Notices.

The International Medical Annual and Practitioner's Index for 1890. Edited by P. W. WILLIAMS, M. D., Secretary of Staff, assisted by a corps of thirty-six collaborators—Europeans and Americans—specialists in their several departments. 600 Octavo pages. Illustrated. $2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The eighth yearly issue of this handy reference one-volume manual is at hand. In its Alphabetical Index of New Remedies and its Dictionary of New Treatment, it richly deserves and perpetuates the well-earned reputation of its predecessors. In this volume its corps of department editors has been largely increased, and important papers upon Thermo-Therapeutics, Electro-Therapeutics, Sanitary Science in City and Country, and the Medical Examiner in Life Insurance are features of special interest. It is truly a helpful volume, a *resumé* of the year's progress in medicine, keeping the busy practitioner abreast of the times with reference to the medical literature of the world. While there is a generous increase in size and material, the price remains the same—$2.75.

Manual of Organic Materia Medica. By JOHN P. MAISCH, Ph. M., Phar. D., Professor of Materia Medica and Botany in Philadelphia College of Pharmacy, etc. Fourth Edition. With 259 Illustrations. Philadelphia: Lea Brothers & Co. 1889. Cloth. Demi 8vo. Pp. 539. Price, $3. (From Publishers.)

This guide to materia medica of the vegetable and animal kingdoms, for the use of students, druggists, pharmacists, and physicians, will prove of incalculable benefit to the physician who seeks information regarding the articles he is constantly prescribing. As a profession, we are too much neglecting the opportunities to learn the origin, appearances, and tests of crude drugs. We venture the assertion that, put three-fourths of the practicing doctors of the country in a medical botanical garden, and they would not recognize one-quarter of the growing herbs, shrubs, plants, and trees from which they derive their greatest help when they come to prescribe them. Many who are reading these lines recognize the application of the truth above stated to themselves. If this notice will stimulate such readers to a determination to at once purchase this best of text-books on organic materia medica, and master every instruction given

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in detail as to the origin, habitat, description, and recognition, constituents, etc., of such articles of the materia medica as they are most commonly using, we would feel this notice had done great good.

Monthly Nursing. By A. WORCESTER, A. M., M. D., Physician to Waltham Hospital, etc. Second Edition. New York: D. Appleton & Co. 1890. Cloth. 12mo. Pp 250. Price, $1.25. (For sale by West, Johnston & Co., Richmond.)

The day cannot be far distant when *professional* monthly nurses will be as much a demand of the times as has become of recent years the popular requirement of having the physician at the bedside of the patient during all stages of labor. The doctor and the patient are both recognizing the greater and greater importance of having only trained nurses for attendance and helpers in labor cases. If the nurse acquires the information contained in this little book, then she can become a trained nurse; and it is not hard to learn the lessons taught, for they are all explained in a most practical manner. We regard this book as of great importance, and doctors should insist upon their monthly nurses adopting it as a text-book for constant bedside use.

Practical Electricity in Medicine and Surgery. By J. A. LIEBIG, JR., Ph. D., Assistant in Electricity, Johns-Hopkins University, etc., and GEORGE H. ROHE, M. D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore, etc. Profusely Illustrated. Philadelphia and London: F. A. Davis, Publisher. 1890. Cloth. 8vo. Pp. 383. Price, $2 net. (From Publishers.)

This book fills a demand. It gives a reality to that which is so often presented to the student as something past understanding and beyond the power of practical application. While the principles involved in its every page show intimate familiarity on the part of the author, with all the accredited theories of this remarkable force in nature, the practical uses of electricity and how to deal with it for remedial purposes are so plainly described as to make the acquirement of knowledge about it a pleasant pastime task. No one who undertakes the treatment of diseases by electricity can afford to be without this excellent guide-book; while he who does not use electrical force as a remedial agent lays aside an agent powerful for good in intelligent hands, and one that is absolutely essential for the cure or

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relief of very many conditions. Part I of the volume, covering some 140 pages, is given to definitions, descriptions, etc., of electricity, magnetism, batteries, storage electricity, etc. The practical part for the doctor begins with Part II, which treats of electro-physiology, electro-diagnosis, electro-medical apparatus, etc. Part III, occupying 200 pages, is taken up with general therapeutic effects of electricity and methods of application, special electro-therapeutics, etc. This work is so excellent and valuable to the practitioner that we would recommend that he should add this to his office library for constant use—it makes no difference what other books he may have on the subject.

The Evil that has been Said of Doctors—Extracts from Early Writers. By Dr. S. J. WITKOSKI. *Translated with Annotations.* By T. C. MINOR, M. D. Cincinnati: Robt. Clarke & Co., Publishers. Pamphlet. Pp. 136.

This volume is a reprint of the articles appearing *seriatim* for some months last year in the *Lancet-Clinic*. History and literature have been searched, so as to gather into one volume all "the evil that has been said of doctors," and the compilation makes a very readable book. Many good suggestions for daily observation can be gathered from some of the intended "hits" at the profession.

A Text-Book on Diseases of the Eye. By HENRY D. NOYES, A. M., M. D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College; Executive Surgeon to the New York Eye and Ear Infirmary; Recently President of the American Ophthalmological Society, etc., etc. Royal octavo. 783 pages. Richly illustrated with chromo-lithographic plates and 280 engravings. Price, in extra muslin, $6; in sheep, $7. New York: Wm. Wood & Co. 1890. (From Publishers.)

No ophthalmic surgeon in this country could have undertaken a work of the magnitude of the present volume with greater gratification to the profession than Dr Noyes. He assumes the proper position in stating substantially that the specialist in eye diseases should first of all have become familiar with the principles of general practice. He presents the work now before us as the outgrowth from a treatise published in 1881 as one of Wood's Library of Standard Authors. And so thoroughly well has his task been done as an author, that hereafter, for years, constant reference must be made to this volume as the standard work on

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eye diseases. Stellwag and Wells and other standard books of a former day will have to be laid aside, in order to make room for this book, which fills their place. Of course our limited space does not allow a review. But the announcement of the issue of the work is enough, or should be, to make every general practitioner who even "dabbles" in eye surgery, etc., to make haste in supplying his library with a copy. It is simply indispensable to such a practitioner. The specialist who does not soon familiarize himself with it, would show himself as willing to remain untaught. It is simple in style, accurate in detail, plain in teaching, and admirable as the standard work on eye diseases.

Diabetes Mellitus and Insipidus. By ANDREW H. SMITH, M. D., Professor of Clinical Medicine and Therapeutics at New York Post-Graduate Medical School. 12mo. Pp. 74.

Education and Culture as Correlated to Health and Diseases of Women. By A. J. C. SKENE, M. D. Pp 127.

Treatise on Fractures. By Prof. ARMAND DESPRES. Surgeon of Charity Hospital, etc., Paris. Translated by E. P. HURD, M D. Pp 112.

These are three recent issues of the "Physician's Leisure Library," published monthly by Mr. Geo. S. Davis, of Detroit, Mich., at 25 cents a number, or $2.50 for annual subscription to the twelve numbers. The mention of the titles and the authors, as given above, would alone warrant the assertion that the "Library" is well made up. Wood cuts illustrate the text wherever necessary. We wish we could persuade all our friends, who are able, to become regular subscribers to Mr. Davis' "Leisure Library."

Neuroses of the Genito-Urinary System in the Male, with Sterility and Impotence. By Dr. R. ULTZMANN, Professor of Genito-Urinary Diseases in University of Vienna. Translated by GARDNER W. ALLEN, M. D., Boston University, etc. Philadelphia and London; F. A, Davis, Publisher. 1889. Cloth. 12mo. Pp. 160. Price, $1 (net). From Publisher.

The excellent success resulting under the careful treatment by Dr. Ultzmann of neuroses due to disorders of the genito-urinary organs give to this book a special value. The secret of his success rests in his continuance in the study of a given case until he finds the cause. This book we look upon as very useful to the general practitioner, as he is constantly meeting with cases of sterility, impotence, and many neurotic troubles of the genital system about

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which he is consulted. The monograph is rich in detail and full of practical suggestions and directions.

Syllabus of the Obstetrical Lectures. By RICHARD C. NORRIS, A. M., M. D., Demonstrator of Obstetrics University of Pennsylvania. Philadelphia: W. B. Saunders. 1890. 12mo. Cloth. Pp. 154. Price, $2. (From Publisher.)

The unusual price for a book of such few pages is due to the fact that this "Syllabus" of Prof. Hirst's Lectures was intended chiefly to enable members of the College-class the more satisfactorily to follow the lecturer. To the student the book is a full guide for understanding; and for the practitioner of medicine, it contains many suggestions that refresh memory or inform him of the most recent advances.

Essentials of Gynæcology Arranged in the Form of Questions and Answers. By EDWIN B. CRAIGIN, M. D., Attending Gynæcologist to Roosevelt Hospital, etc. With 58 Illustrations. Philadelphia: W. B. Saunders. 1890. Cloth. 12mo. Pp. 192. Price, $1. (From Publisher.)

This is No. 10 of "Saunders' Question Compends," prepared especially for students of medicine, but just as well suited for graduates who are preparing for examinations before State Boards of Examiners, etc. We have so often commended these questions and answers books for the purposes indicated, that it is only necessary to add that the present little volume is fully the equal in value to any of its predecessors.

Diseases of Women and Abdominal Surgery. By LAWSON TAIT, F. R. C. S., Edin. and Eng., LL. D., M. D., etc. Professor of Gynæcology in Queen's College, Birmingham, Eng,. etc. Vol. I. Philadelphia: Lea Brothers & Co. 1889. Cloth. 8vo. Pp. 547. Price, $4. (From Publishers.)

This work will be eagerly sought after, as soon as announced. It is not stated on the title page how many volumes will be required to complete the work, nor have we received information as yet of the issue of the second volume, for which we were waiting. Whatever may be said against the abruptness of address of the author, and the prominence of the *ego* in whatever he has to say or do, it will be conceded, on all hands, that his primary doctrines of female surgical diseases have ripened, for the most part, into established truths—adopted in theory and in practice.

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Mr. Tait appears, at first sight, to be a reckless, slap-dash sort of a surgeon; but his wonderful record of success shows that he is simply intuitive in judgment, careful in the observance of details in operations, and attentive to after-treatment. But the personality of his writing gives the author an excellent opportunity to describe, in an easy way, the details of selection of cases and operations. No one who undertakes female surgery can afford to be without this book.

Spinal Concussion. By S. V. CLEVENGER, M. D, Consulting Physician Reese and Alexian Hospitals; Late Pathologist County Insane Asylum, Chicago, etc. With 80 wood engravings. Philadelphia and London: F. A. Davis, Publisher. 1890. Cloth. 8vo. Pp. 359. Price, $2.50. (From Publisher.)

It will more than fully explain the scope of this monograph by giving the title in extenso: "*Spinal Concussion: Surgically Considered as a Cause of Spinal Injury, and Neurologically Restricted to a Certain Symptom Group, for which is Suggested the Designation, Erichsen's Disease, as one Form of the Traumatic Neuroses.*" The author's original views, based on quite recently discovered symptomatology and exclusion of previous errors in diagnosis, are that the spinal sympathetic nervous system is the main seat of the disease, and that in consequence the cord functions are deranged. This work is not undertaken to supplant the now classical one by Erichsen on *Spinal Concussion*, or *Railway Spine*, as some have styled it. Nor does Dr. Clevenger make dogmatic statements, in the expectancy of their acceptance, unless confirmed by experience and observation in practice. While not a text-book, it will yet be read by lawyers, professors, practitioners, and laymen, because of the many valuable suggestions it contains. We commend the work to the study of all doctors and medico-legal jurists.

Year-Book of Treatment for 1890. By TWENTY-ONE ENGLISH CONTRIBUTORS. Philadelphia: Lea Brothers & Co. 1890. Demi 8vo. Cloth. Pp. 324. Price, $1.25. (From Publishers.)

This annual publication is not only a restatement in brief of suggestions in the way of advances in the treatment of diseases, but a critical review of such publications by competent authorities. Each of the twenty-one contributors has had charge of as many different clinical branches; so that there has been ample provision for thorough study

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of plans of treatment. The work is fully up to the issues of the December journals of 1890. This book *ought* to be in the hands of every practitioner to enable him to keep up with the advances of last year in the line of treatment of diseases—whether medical, surgical, obstetrical, etc.

Wood's Medical and Surgical Monographs. Vol, V. No. 3. March, 1890. Published monthly. $10 a year. Single copy, $1, Wm. Wood & Co., Publishers. 56 and 58 La Fayette Place, New York. 8vo. Pp. 316.

This number contains the index for Vol. 5. Its contents are as excellent as usual. The subjects of the monograph are: (1) *Treatment of Cancer by Electricity*, by Dr. J. Inglis Parsons, of London; (2) *The Dreadful Revival of Leprosy*, by Dr. Morrell Mackenzie; (3) *Diseases of Old Age*, by Dr. A. Seidel; (4) *Urinary Neuroses of Childhood*, by Dr. Louis J. Guinon; (5) *Varicose Veins of the Lower Extremities*, by Mr. Wm. H. Bennett; and (6) *Uses of Electrolysis in Surgery*, by Dr. W. E. Stevenson.

Massage and the Original Swedish Movements—Their Applications to Various Diseases of the Body. By KURRE W. OSTROM, Instructor in Massage and Swedish Movements in the Hospital of the University of Pennsylvania, and the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1890. Cloth. 12mo. Pp. 97. Price 75 cents. (For sale by West, Johnston & Co., Richmond.)

The value of this book consists mainly in the details of the methods of "massaging," and of applying the "Swedish movements" to different muscles and organs of the body. The profusion of wood-cut illustrations adds greatly to the lessons of instruction. Doctors and nurses would do well to master the teaching of the details herein given. It is a useful book.

Manual of Nursing—Medical and Surgical. By LAURENCE HUMPHREY, M. A., M. B., M. R. C. S., Assistant Physician to, and Lecturer to Probationers at Addenbrooke's Hospital, Cambridge. With Numerous Illustrations. Philadelphia: P. Blakiston, Son & Co. 1890. Demi 8vo. Pp. 242. Cloth. (For sale by West, Johnston & Co., Richmond.)

There is such a steady advance in the direction of professional nursing as to compel the physician who is to direct the management of a case to familiarize himself more and

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more with the practice of others, and the teachings of the books on the subject. Else he will soon find the nurse in the sick room better prepared to direct the management of a case, so far as nursing is concerned, than the doctor himself. The plan of this most valuable Manual is, first, to give briefly the anatomy of organs, and immediately afterwards to treat of the diseases of these organs, with an outline of the appropriate treatment, including receipts of food suited to the invalid. Descriptions of baths, enemata, poultices, bandaging, nursing appliances, etc., are given. The chapter on the management of childbed is an excellent one. The book itself is an excellent one for doctors, students, and nurses.

Manual of Diseases of the Skin, with Special Reference to Diagnosis and Treatment. By W. A. HARDAWAY, M. D., Professor of Skin Diseases in Missouri Medical College, and in St. Louis Post-Graduate School of Medicine, etc. St. Louis: Theo F. Lange. 1890. Cloth. Square 8vo. Pp. 434. Price, $3. (From Publisher)

We do not know when we have come across a book on skin diseases that so exactly fills "the long-felt want" of the general practitioner of medicine as this one. Almost without knowing it, the reader of this *Manual* learns to recognize the skin diseases that may be under study; for in the plainly-written description of the disease all the questions of diagnosis relating to it are distinctly brought out as "reading matter." The sections on treatment of the various diseases are admirably well prepared for the wants of the physician, and the recommendations made as to formulæ or agents have the high authority of having been tested clinically. We sincerely hope practitioners will secure, read, and apply the teachings of this admirably-prepared *Manual* to the suitable cases, as described in its pages.

Black Eye.

There is nothing to compare with the tincture or a strong infusion of capsicum annuum mixed with an equal bulk of mucilage of gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's hair pencil and allowed to dry on.—a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent the blackening of the bruised tissue.—*N. Y. Med. Times—Pharm. Era*, March, 1890.

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Editorial.

The Twenty-First Annual Session of the Medical Society of Virginia

Will be held at Rockbridge Alum Springs, Rockbridge county, Va., beginning Tuesday night, September 2d, 1890, and will most probably continue in session through Friday morning, September 5th. All who may attend this session —including the ladies who may visit this famous Springs' resort with the doctors—will be charged only $1.50 per day during the sessions of the Society. As to the place itself, the route by which to reach it, its attractions, and the therapeutic values of the waters, etc.—these are set forth in part in the page advertisement of the Rockbridge Alum Springs, to be found in this journal. The Executive Committee (Dr. William W. Parker, of Richmond, Va., chairman), has appointed Honorary Fellow, Dr. J. Edgar Chancellor, Resident Physician at the Springs, chairman of the local Committee of Arrangements. He will appoint such Assistants as he may need.

This Twenty-First Session of the Medical Society of Virginia promises to be as interesting and profitable scientifically as any ever held. Papers and reports are being prepared by members, and by some who propose to attend as delegates and visitors. The prize of one hundred dollars, so generously offered by Ex-President and Honorary Fellow, Dr. Hunter McGuire, will add a stimulus to Fellows to write on the subject named in another editorial note in this issue. It will be noticed that Dr. McGuire extends the invitation for competition for his prize also to members of either the North Carolina or the West Virginia Medical Society, as he is an Honorary member of both these State organizations, which are almost always fraternally represented during the sessions of the Medical Society of Virginia. It may be further noted that the Secretary of the Society has received more applications for Fellowship than ever before in the history of the Society at so early a day in advance of the session.

It would be well for Fellows of the Society who may wish to invite any of their eminent friends, residing in other States, to be present, to be reminded that each such party must be nominated to the Committee on Invitations, for the Society (Dr. Landon B. Edwards, of Richmond, Va., chairman), by which Committee all such wished-for invitations are to be considered and acted on.

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Buffalo Lithia Springs (Va.) Water—Its Uses After Surgical Operations, Etc.

Hunter McGuire, M. D., LL. D., etc., formerly Professor of Surgery in the Medical College of Virginia, Ex-President of the Southern Surgical and Gynæcological Association, etc., in a recent conversation with us on the subject of Mineral Springs Waters, made special mention of the use of Buffalo Lithia Water after cases of laparotomy and other surgical operations. Feeling assured that his views on this subject would be of interest to the Profession generally, we requested a statement of his opinion, and obtained his permission to quote him as follows:

"RICHMOND, VA., March 24th, 1890.

"*Dear Dr. Edwards*—I have just received your letter of this date. I use Buffalo Lithia Water very freely in my hospital. After every case of laparotomy, I give this water for its diuretic properties, and because the stomach bears it so well—often retaining it when everything is rejected. Indeed, I use it freely after nearly all my surgical operations. It is especially valuable in supra-pubic cystotomy. Many years' experience in its use only confirms the good opinion I have so often expressed in regard to it.

"Yours very truly,

"HUNTER MCGUIRE."

Medical Department of University of Nashville and Vanderbilt University.

The most brilliantly successful of any of the annual Commencements of the Medical Department of this University (for it is, practically, but one institution) was held in Nashville, Tenn., February 26th. The valedictory address on the part of the graduating class was delivered by Dr. Otey J. Porter, of Tennessee. Chancellors Payne and Landon C. Garland conferred the degree of Doctor of Medicine on the 138 graduates. The Lecturer on Medical Jurisprudence, J. B. DeBow, Esq., delivered the address on the part of the Faculty. Of the 138 graduates, 62 were from Tennessee; 16 from Texas; 15 from Alabama; 9 from Arkansas; 8 from Mississippi; 6 from Kentucky; 5 from North Carolina; 3 from Georgia; 2 each from Virginia, South Carolina, Missouri, Michigan, and Oregon; and 1 each from Louisiana, Illinois, California, and Japan.

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Our Mineral Springs Advertisements.

The number and popularity throughout the country of our medicinal Springs advertisements, begun and continued in this number, must attract attention. A moment's reflection will convince any one of a common belief in their efficacy; and surely the proprietors and owners themselves have confidence in their restorative qualities. Not one of the Springs advertised but has the unqualified recommendation of men able and prominent in the profession. These distinguished professional men are beyond the sphere of the incentive to lend their names to the encouragement of a false medical notion; for they must know that a false certificate "unhesitatingly given," as most of their opinions are, would soon expose them to the rebuke of the honest and the jeers of the learned.

What, then, does all of this mean? Why do all these distinguished men themselves, and with their families and sick friends so regularly, as opportunity affords a season to do so, repair to these Mineral Springs, and drink freely of their waters? Why is it so nearly impossible to make a *health resort*, without the accompaniment of medicinal springs, of simply a mountain home, with its grand sweeps of landscape scenery, and its associated rare and pure air? The reason is only that experience and observation have taught that these celebrated *Springs* resorts are health resorts, and that the waters furnished at them possess remedial and curative properties.

Our space does not allow us room to note the special advantages of each of the Springs advertised. Let it suffice to remark that we believe the statements made in each of the advertisements of the several Springs are true and reliable, however meagre, and that for more detailed information application should be made at once to the respective proprietors for a descriptive pamphlet, which each of them issues. It will be found that almost every form of chronic sickness has been benefited by a sojourn for a season at one or the other of them.

It will be noticed that each of the Springs advertised in this journal can be most conveniently and comfortably reached by the Southern traveller *via* the Piedmont Air-Line system of railways. This railroad company has been unsparing in its efforts and in the expenditure of money to bring its lines of track and the passenger coaches, etc., as nearly up to perfection as possible. All the luxuries of

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travel in a railroad car are provided for on the Piedmont Air-Line System.

A Conference of the Medical Colleges of the United States

Has been called, to be held in Nashville, Tenn., during the week of the meeting of the American Medical Association (May 20–23), to discuss and to act on the following subjects: (1) Three years' course of six months' session; (2) The propriety of establishing a graded curriculum; (3) Whether to require written or oral examinations of candidates for graduation; (4) Whether to require, or not, a preliminary English examination before permitting matriculation; and also (5) The necessity of requiring laboratory instruction in chemistry, histology, and pathology. We are glad to know that such wide-awake institutions as our Baltimore Colleges are taking the lead in this movement, for they have shown a commendable desire to advance the standard of medical education.

Inter-State Relations of State Medical Examining Boards.

Now that the medical communities of the United States are about agreed as to the propriety and necessity of State Medical Examining Boards to test the merits of those who apply for license to practice medicine, it is beginning to be time to agitate the question as to whether or not there should be an agreement between the Examining Boards of different States to accept the certificate of examination by one State Board as entitling the holder to practice without another examination in the other State. We have thought over the matter a great deal, and we are persuaded that some of the State Boards should take the lead in the matter for exchange of courtesies. For instance, the North Carolina and the Virginia Boards have adopted about the same standard of requirements in order to secure certificates. We do not see the necessity of causing a doctor, who has just passed his examination before one Board, to go before the Board of the other State. We trust the subject will be taken up and thoroughly ventilated, and that some satisfactory agreement will be reached within the year on the subject.

Dr. McGuire's $100 Prize Offer.

Dr. Hunter McGuire offers a prize of one hundred dollars for the best original essay on "*The Diagnosis Pathology and*

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Treatment of Chronic Cystitis in the Male." Competitors for this prize must reside in Virginia, West Virginia, or North Carolina. The essays must be printed or type-written. Each essay must be designated by a motto on the first page. A corresponding motto, together with the name of the writer, must be enclosed in a sealed envelope and attached to the essay. All of these essays must be sent to the Secretary of the Medical Society of Virginia (Dr. Landon B. Edwards, Richmond, Va.,) by August 15th. The Medical Society will be asked to determine by whom and in what manner these essays are to be examined. The name of the successful author alone will be made public.

The Late Dr. Lewis Hall Sayre.

The deserved tributes which some of our foreign exchanges—notably the *Lancet* and the *British Medical Journal*—have paid to the memory of this young, but gifted surgeon, tend only to sadden the knowledge of his untimely and sudden death. He was just at the age to mature his observations, and the results of his immense practice, so as to become a teacher among teachers. The touching resolutions of sorrow and of sympathy for the bereaved widow and father, adopted by so many Societies, of which he was not even a member, and the volunteer "in memoriams," which fill so many columns of journals and periodicals, garlanding in profusion the recollections of his many generous acts of friendship, must serve to lighten the burden of affliction falling upon his family.

Long Island College Hospital, of Brooklyn.

During the Commencement, held March 13th, the degree of Doctor of Medicine was conferred on 55 graduates. The Hoagland Laboratory, connected with this College, and which, being well-managed, has given it such a deserved distinction among the few important medical schools of the country, has just received an additional donation from its founder, Dr. Hoagland, of $50,000, to make more perfect some departments which were already good.

The Louisiana State Medical Society

Will meet in Baton Rouge, La., *May* 13, 1889, instead of another date accidentally named in the *New Orleans Medical and Surgical Journal*, when "the grippe" was about, we suppose, as we see a "grip" was left at their office "marked E. P. Demic." Our punster left before the epidemic came.

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Our Seventeenth Annual Volume

Begins with this April number. We hope friends everywhere will help to improve the journal by contributing their practical experiences, and by calling our attention to matters of professional and local medical interest. Newspaper items should be marked when the papers are sent us. We are specially anxious to promote the interests of county, town, and city medical societies by publishing their proceedings, etc., when furnished.

Obituary Record.

Dr. Moritz Augustus Rust

Was accidentally and suddenly killed by a fall upon his head from a ladder in his house, in Richmond, Va., March 20th, 1890. There is scarcely a Fellow of the Medical Society of Virginia who had not become acquainted with him through his contributions to its annual *Transactions;* and through the pages of this journal he had become well-known to the profession of the country. He was born about seventy-two years ago, near Vienna, Austria, and graduated at the University of that place; afterwards perfected himself at the Universities of Berlin and Paris; and finally went to London, where he was employed in the hospitals, and practiced his profession, and married. He came to this country about 1853, and was for some time located in New York; but upon advice that there was a good opening here for at least one German physician, he came to Richmond before the war, and ever since resided here, and had accumulated a comfortable fortune. He joined the Medical Society of Virginia in 1880, and became one of its most valued scientific members. He also took an active part in the proceedings of the Richmond Medical and Surgical Society, which has recently been merged into the new organization of the Richmond Academy of Medicine and Surgery.

Dr. Rust was one of the most erudite men in the profession, and was the possessor of more diplomas probably than any other doctor in Virginia. He was a man of quiet and modest manners, but of strongly marked characteristics and firm opinions. For a great many years he enjoyed a very considerable practice, but advancing years and declining health compelled him to relinquish a good deal of it, and

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for some time past he had been refusing to go out at night, except in the most urgent cases.

His wife and one daughter survive him.

His funeral took place from Grace Episcopal church.

At a called meeting of the Richmond Academy of Medicine and Surgery, held March 21st, 1890, the following was adopted:

Whereas it has pleased the All-Wise God to remove from our midst Dr. Moritz Augustus Rust:

Resolved, That the profession of the city, and our Society, have lost a man of great learning and erudition, whose place will be hard to fill. His medical advice was often sought by those in doubt, and his opinions were highly respected. He was a man of the strongest convictions, and his conclusions were supported by logical reasoning. As an indefatigable worker, he was an example to us all. Even in his last feeble years, he was a diligent student and a prolific writer.

Resolved, That a copy of these resolutions be sent to the family, spread upon the Minutes of the Society, and published in the medical journals and daily papers of the city.

Hugh M. Taylor, William B. Gray, and M. D. Hoge, Jr., *Committee.*

Dr. John Patrick Mushat,

Of Haynesville, Ala., one of the College of Counsellors of the Medical Association of the State of Alabama, died at his home February 14th, 1890, after a somewhat lingering illness. He was born at Statesville, N. C., May 13th, 1830. In 1835, his father's family moved to Alabama. In 1858, he graduated in Medicine from the Medical College of South Carolina. He entered the Confederate Army as a private, but soon afterwards became Assistant Surgeon of the Fifth Alabama Regiment. After the war, he settled in Haynesville, and became a practitioner of useful influences. His town paper says: "No country physician ever had a larger clientelle, or a more devoted one." His interest in all that tended to the elevation of his profession was manifested to the end of his life. He was twice married—leaving a daughter by his first wife, and three sons and four daughters by his second. His loss to his State Association will be felt, for he was prompt in attendance, faithful in the discharge of duty, and ever alive to its interests in his community.

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VIRGINIA
MEDICAL MONTHLY.

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RICHMOND, MAY, 1890.

Original Communications.

ART. I.—Some Notes on the Use of Realgar-Arsenic Di-Sulphide ($As^2 S^2$), in the Treatment of Skin Diseases.*

By THOMAS M. McLAUGHLIN, M. D., of Washington, D. C.

LATE PHYSICIAN-IN-CHIEF, PHILADELPHIA HOSPITAL; LECTURER ON DERMATOLOGY, MEDICAL DEPARTMENT NATIONAL UNIVERSITY, WASHINGTON, D C., ATTENDING DERMATOLOGIST WASHINGTON DISPENSARY FOR SKIN DISEASES; MEMBER OF THE MEDICAL ASSOCIATION, AND OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA, ETC.

Last Spring I had the honor to present to this Society a preliminary report of the results which I had obtained from the use of realgar, the di-sulphide of arsenic. Since then I have employed this preparation of arsenic in a large number of cases. I present these notes to-night to inform you that the favorable report which I submitted of its action, has been fully confirmed by subsequent use, both in my private and hospital cases, as well as in the hands of other members of this Society.

It may be advisable for me to mention, in a cursory manner, some of its chemical properties.

* Read before the Medical Society of the District of Columbia.

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The compounds of arsenic and sulphur* are—

Arsenic di-sulphide (or realgar), $As^2 S^2$.

Arsenic tri-sulphide (or orpiment), $As^2 S^3$.

Arsenic penta-sulphide, $As^2 S^5$.

Arsenic Di-Sulphide, (realgar), $As^2 S^2$.—This body occurs in nature in the form of transparent, red crystals, which belong to the type of the oblique rhombic prism. It is obtained as a red mass, having a conchoidal fracture by melting seventy-five parts of arsenic with thirty-two parts of sulphur. It is fusible, and may be crystallized by slow cooling. When strongly heated in closed vessels, it boils and distils without alteration; but when heated in the air, it burns into arsenious and sulphurous oxides.

Since it is the general impression that the crude preparations are frequently insoluble and inert, and with a view of showing what some of the most eminent and distinguished authorities have concluded after a careful investigation, I am prompted to quote the following paragraph :†

"It is now established beyond reasonable doubt, that in some parts of Lower Austria, as Styria, many of the inhabitants are accustomed to take considerable quantities of arsenic, sometimes as a condiment, with food. It is said they often eat it with cheese. They usually begin with a small dose, once or twice a week, the quantity being gradually increased until half a grain, or a grain, or even more, is taken at one time. This habit seems to induce no untoward symptoms. Arsenic is eaten for a two-fold purpose. The women, and even the men, take it to clear the complexion and to improve the personal appearance; and it is said to effect these objects. The men more frequently take it to enable them to undergo great exertion without fatigue, and they maintain that it enables them to climb mountains and accomplish fatiguing tasks, impossible to accomplish without it. The experience of most countries is opposed to the Styrian practice, for it is generally found that the long sustained administration of arsenic fails to induce tolerance of the drug; but, on the contrary, entails serious consequences. Even in the arsenic eating countries, the habit is not without risk, for there it is the general opinion that many fall

* Wurtz's Chemistry.—Greene.

† Ringer's Hand-Book of Therapeutics, 11th Ed. page, 225.

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victims to the drug. It has been supposed, that taken in an insoluble form, the arsenic is not absorbed at all, but passes out with the motions, leaving the system unaffected by it; but Dr. Maclagan's investigations effectually disposed of this supposition, for after witnessing a well known arsenic eater eat arsenic, and afterwards collecting his urine, a considerable quantity of poison was obtained from it."

I have employed this drug in the treatment of a variety of diseases, and will state them in order to more fully show its action.

Dr. X, a physician, has been a sufferer with psoriasis for six years; at no time during this period has he been free from the eruption, which was general in its distribution. He had been trying, as you will readily suppose, nearly everything in the Pharmacopœia for relief. He was unable to take any of the arsenical preparations ordinarily prescribed, on account of an idiosyncrasy. He was opposed to using the local remedies which I prescribed, as they interfered with his professional work. He began by taking one granule 1-100 gr. of realgar three times a day, and gradually increased the dose to eight granules three times a day. There was a general improvement in his physical condition; and after a few months use of this remedy, the eruption entirely subsided. He neglected to continue the remedy as he had been advised, and there was a return of the disease, which again subsided after a further use of the drug. This remedy produced no disagreeable effect like the other preparations of arsenic, and was the only one he was able to tolerate.

This physician has furnished me with a statement of the results he has obtained in eight cases in his private practice, and the results have been satisfactory. I have prescribed realgar in many cases of acne, furuncles, and where there has been any suppuration—in fact, for such purposes as I prescribe sulphide of calcium—and have obtained as good results. I have used the remedy in chronic eczema, and obtained the same effect that I should have expected from the other forms of arsenic.

In scrofulosis, syphilis, and cases of marked debility, I have prescribed realgar for its tonic alterative properties, and have been gratified with the results. I begin by prescribing one granule of 1-100 gr. three times a day; and

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every third day increase the dose one granule, until I observe some definite effect being produced.

I have used this remedy in more than a hundred cases, and I present these notes of my further observation of its action.

CONCLUSIONS.

The combination of arsenic and sulphur is frequently preferable, and more serviceable than either of the remedies when used singly. The pleasant form in which it is administered, makes it agreeable for children as well as adults. It is tasteless. It can be more safely administered, since there is no danger from an over-dose, as frequently appears from carelessness in dropping the quantity prescribed in using the solutions.

The dose may be readily and definitely increased or diminished. It does not produce the amount of irritation of the stomach, so frequently attending the use of the other forms of arsenic. The patient is not aware that arsenic is being administered, and it is of uniform strength when properly prepared by competent manufacturing chemists.

In presenting these notes to-night, I simply desire to inform you that I have found that realgar possesses certain medicinal properties, and there may be occasions when the other preparations of arsenic do not seem to meet the indications, when the triturates of realgar may be considered worthy of a trial.

No. 825, *Fourteenth Street.*

ART. II.—**Diseases of the Accessory Sinuses of the Nose—with Cases.***

By W. CHEATHAM, M. D., of Louisville, Ky.

LECTURER ON DISEASES OF THE EYE, THROAT AND NOSE, UNIVERSITY OF LOUISVILLE.

Under this head, "Accessory Sinuses of the Nose," we include the antrum of Highmore, the ethmoidal, sphenoidal, and frontal sinuses.

* Read before the Medico-Chirurgical Society, March, 28th, 1890.

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Normally, the mucous lining of these sinuses secrete just enough mucus to keep the surface moist. If anything should occur to cause hyperæmia of this lining membrane with increased secretion, and this cause exist for some time, such as an extension of inflammation from surrounding tissues, which also may close the communication between these sinuses and the nose, thus retaining the secretions, it frequently degenerates into a purulent form of inflammation.

In this paper it is my wish to speak only of this form of inflammation of these parts, as the cases I shall report are of this kind. Dental caries, is another most frequent cause of inflammation of the Highmore antrum.

CASE I.—Mr. S. Merchant, for four or five years, has had neuralgia of left side of face. For some years has had discharge from left nostril, with frequent stenosis of that side. His health has been much impaired lately. He consulted me some weeks ago concerning his trouble. I found a large, nasal polyp, springing from the inferior edge of middle turbinated bone. This was removed easily by the cold snare; then an ugly discharge could be seen trickling down over the inferior turbinated bone. This discharge was worse when he would lay on his right side, or if head was held well over edge of bed. With the new electric light test, which I have demonstrated to this Society, the left side of the face would not light up. Injecting a little 10 vol. peroxide hydrogen into the opening of the antrum, there was great effervesence and discharge of pus. His second molar, from the rear, was badly decayed; I sent him to a dentist and had this removed, and a hole drilled into the antrum, which was followed by a free discharge, with an excessive disagreeable odor, so offensive that the dentist had to open the windows and doors to ventilate his office. The cavity has been kept well washed out with 10 vol. peroxide hydrogen, warm carbolized water and zinc chloride, gr. x, aqua ℥j. In a few weeks Mr. S. gained ten pounds; has had no neuralgia since, and the discharge now has nearly ceased.

I consider this a very favorable case; have seen some last for years, followed by necrosis of both mucous lining and bone. In Berlin, I saw Krause treating a case of antrum abscess, in which he had drilled quite a large hole above

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the teeth, and packed the cavity with strips of iodoform gauze.

The diagnosis of this trouble is not an easy matter. When this new electric test light was first spoken of, and when I demonstrated it to this Society, I felt we had a sure point in diagnosis. That we have not, the next case, and several others I could give, will show.

CASE II.—Has had a discharge from his right nose for several years. He has been under my observation for one or two years. This discharge can be seen coming down from behind the middle turbinated bone, running over the inferior turbinated. It is much more free in the morning and afternoon to 4 o'clock; more free while in an erect posture. The electric test shows right side of face to be absolutely dark. I thought from this, with the other symptoms, that the abscess was in the antrum. The same dentist who drilled in the first case, drilled above the teeth in this case into the antrum. I have washed the antrum out well with the hydrogen peroxide, which passes into the nose, but get no pus. I kept this opening patent for a few days, and finally let it close itself, perceiving I was mistaken in my diagnosis. The discharge being very free; less when laying on the opposite side, or with the head held low over the edge of the bed, but profuse when head is erect, shows, I think, that the abscess was in the ethmoidal cells. These, I have kept well washed out by passing a bent eustachian catheter well up, but have recommended, for free drainage, that part of the middle turbinated bone be removed.

An abscess here, is, of course, an exceedingly serious matter, as it is very difficult to reach, and exceedingly liable to extend to orbit and meninges. Often exophthalmos of the corresponding eye is one of the earliest symptoms, and frequently the abscess opens into the orbit.

CASE III.—Mrs B. for some weeks had noticed a slight swelling in the upper and inner corner of the right orbit. It would be much larger sometimes than at others. When I saw her, it protruded well beyond the edge of the orbit, rather pointed, and with a feeling that it contained fluid, which was quite superficial at the apex; the cyst, which it felt like, was quite sensitive to the touch. I with much persuasion, got her consent to use the aspirator. Finding pus,

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I made a free incision, evacuating at least a tablespoonful. I found quite a large cavity, which I washed out well with the hydrogen peroxide, and warm carbolized water, put in a soft drainage tube, and directed that poultices be applied; when I first saw her the upper lid was so swollen she could not use her eye. The washing and poultices were kept up for two weeks, when all swelling having subsided, the latter was discontinued. The washing is still kept up; fluid frequently passes into the nose. Finding rough bone, I ordered a wash of dil. sulphuric acid gtts., vj to aqua dist. ℥j. Under this treatment the discharge has nearly ceased, the cavity greatly contracted, all swelling subsided, and it looks as if Mrs. B. can soon be discharged, cured. She still wears a drainage tube, which passes into the frontal sinus.

In case No. 1, according to Bosworth, the nasal polyp may have been the cause of the antrum abscess, instead of the effect. He believes a large majority of antrum abscesses occur from nasal stenosis, with closure of the ostium antrum.

I forgot to say in case No. 3, that the eye ball was pushed well down and out, and it could not be moved in, or up and in.

Suppuration of the frontal sinus is exceedingly rare; of sphenoidal sinus, less so; of ethomidal sinus, still less so; and of the antrum, the most common. Pus discharged from all of them has about the same characteristics; that from the antrum and anterior ethmoidal cells, usually flows forward; that from the other sinuses, usually flows back into the pharynx. It flows more freely from the antrum when the patient is lying on the opposite side, or with the head held low; from the other sinuses, when the patient is erect.

Inflammation of the accessory sinuses have been quite common with "la grip[illegible]e." These cases all precede this influenza.

Peacock's Bromides.—I can say, in short, in twenty years of practice I have never found an equal to Peacock's Bromides for fits and disturbed nerve-centres. It possesses a superiority over fits far beyond my expectations. I have recommended it for all it is worth in this locality.—H. J. FAIVRE, M. D., Hamilton, Ohio.

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Art. III.—Secondary Mixed Infection in Scarlet Fever.*

By BAYARD HOLMES, M. D., of Chicago, Ill.

Professor of Surgery in the Post-Graduate School of Chicago, and Attending Surgeon to the Cook County Hospital; Director Bacteriological Laboratory, Chicago Medical College.

The fullest results of the study of parasitic pathology will not be attained until as great improvements are made in the treatment of medical cases as those which have followed the application of bacteriological teachings to obstetrics and surgery. As the greatest dangers to wounds and to the uterus and breast of lying-in women is from infection with destructive facultative parasites, so the greatest danger in the acute infectious diseases, in tuberculosis of the lungs, in typhoid fever, and especially in scarlet fever, is from secondary infection with destructive facultative parasites. I should like to call your attention to the course of this dreadful disease and to some of its complications, and point out their origin and possible limitation.

No one of to-day doubts that scarlet fever is due to an obligate parasite, and the fact that this parasite has not been cultivated on artificial media and studied, is due to the closeness of this parasiticism. It has become so perfectly adapted to the human host that it can exist in no other, and on no artificial media. It must be studied in the same manner as the *plasmodium malariæ*. The fact that it has been so long associated with man as to become so perfectly dependent on him for its existence, would indicate that it cannot be very destructive as a general thing to its host. Its destructiveness, must, then, depend on conditions which affect the host in limited areas of time and space.

It was particularly noticeable by Pirogoff, that cases of amputation and other major surgical operations, did better in filthy cottages than in large and apparently clean hospitals. In England, the cottage system of hospitals was found to result in a smaller death-rate than obtained in the large

* Read before the Tennessee State Medical Society, in Memphis, April 8th, 1890.

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hospitals. Puerperal fever, before antiseptic measures had been applied in obstetrics, was less frequent and destructive in country practice than in great hospitals. Has not every physician noticed an analogous relation in the death-rate from scarlet fever? Do we not look upon the second and third and fourth case in any household as more dangerous than the first case? And is it not a notable fact that the worst cases occur when diphtheria without scarlet fever is rife? It seems to me that the history of a typical case of scarlet fever without complication is something as follows:

A few days after exposure, without warning, the patient has a pronounced chill. This is the beginning of the infection of the blood. The temperature rises and the eruption appears on the tender skin, and at the same time, there may be symptoms of pneumonia, nephritis, gastritis, enteritis, and inflammation of a parenchymatous organ. These symptoms are due not so much perhaps to embolism, with the invading bacteria, as with blood-plaque, emboli, and resulting coagulation changes in the neighborhood. The septicæmia—infection of the blood—is self-limited, and the invading parasite is soon overcome. The symptoms subside and the patient makes a prompt and rapid recovery. The slight disturbance in the pharnyx, seems to indicate that this is the *atrium* of infection. The desquamation is not different, except in amount, from the desquamation which follows all forms of septicæmia.

Everything points to the fact that scarlet fever is a septicæmia, self-limited in its nature, and finding its atrium of invasion in the pharynx, and probably in the tonsil, and manifested by all those symptoms which characterize septicæmias of other kinds. From the nature of parasiticism it ought not to be very destructive, and we rarely see a case terminate fatally during the course of uncomplicated disease. Most of the deaths, and all the sad consequences which follow this exanthem, are due to complications, which, I hold, are in a measure, due to preventable causes.

One of the most frequent symptoms of an unfavorable course of scarlet fever is, the enlargement of the cervical

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lymph-glands. When an opportunity is offered for the examination of these glands, they are found crowded with chain cocci, and the same condition may be traced up to the tonsil and the walls of the pharynx, the connective tissue of which is found crowded with the same streptococcus. Clinicians have long noticed the unfavorable import of these enlargements, and it only remained for the bacteriologists to show that they were symptoms of secondary streptococcus infection, which was exactly analogous to the infection of wounds, or of the uterus. The streptococcus is carried on and poured into the subclavian vein. On the valves of the heart, the physiological traumatism may determine a localization, and each opposing edge may become the seat of a streptococcus colony, and a source of subsequent protracted infection. Capillary embolism occurs in the lungs, but the streptococci, enclosed in leucocytes, are carried to the systemic side of the circulation, where all the consequences of a secondary septicæmia follow. The parenchymatous organs show changes due to blood-plaque and bacterial embolism, and then appears the secondary nephritis of scarlet fever. The urine contains the excreted cocci, and they are found in the spleen and liver. When the septicæmia is sufficiently severe to produce extensive capillary embolism in the mucous membrane of the intestines, these organs become the seat of diphtheritic invasion, and the ptomaines here produced hasten on a fatal end. Occasionally, with slight manifestations elsewhere, joints are infected with the streptococcus or with bacteria, which have gained admission through some of the secondary defects. No form of suppurative disease has been missed as a consequence of secondary streptococcus infection.

It may be well to consider how this infection is determined. The primary lesion of scarlet fever, is, without doubt, at the seat of invasion, the pharynx. Here is determined a point of least resistance, through which the secondary infection, which has been demonstrated by all observers, finds its atrium. The cleanly condition of the mouth and pharynx, would seem to be indicated, and especially the iso-

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lation of the patient from other cases of streptococcus infection, as from other cases of scarlet fever, from diphtheria and other forms of tonsillitis, from erysipelas, and from all wound diseases. The care of the nose and throat, would, therefore, seem to be the point most strongly indicated. This can be accomplished by frequent washing with mild antiseptics, such as bichloride of soda, thymol, carbolic acid, or peroxide of hydrogen in solution or the use of the solution of bichloride of mercury. The mouth should be kept closed by the use of a support to the chin, and nasal breathing thus secured.

After infection with the streptococci has taken place, the case must be treated as one of septicæmia, and any specific internal medication is irrational. It must be remembered that the nutrition of the patient is a prime requisite to the destruction of the infecting parasite. Surgical treatment may be required for localized infection.

NOTES.—1. In a paper read before the Chicago Gynæcological Society, January 25, 1889, I have discussed this subject *in extenso*. The paper may be found in the February, March, and June numbers of the *North American Practitioner*.

2. My remarks on this subject are published as editorials in the Journal of the American Medical Association for 1889—Vol. 11.

3. Secondary Mixed Infection in Typhoid Fever, was the title of an article which I read before the Chicago Medical Society, July 2, 1888. It was published in the *Western Medical Reporter*, and in the *Journal of the American Medical Association* for 1888, and copied into the *Medical Press and Circular* for 1889.

4. The limitations of parasiticism are discussed in a paper which will appear under the title, "The Evolution of Infection," in one of the many issues of the *Journal of the American Medical Association*.

5. The most important and conclusive investigations of the condition of infection in the complications of scarlet fever are those of Babes (Bacteriologische Untersuchungen ueber septische Processe des Kindesalters, Leipzig, Veit & Co., 1889), and Raskin (Klinische experimentalle Unterschungen ueber Secundar-infection bei Scharlach, Centralblatt fur Bacteriologie und Parasitenkunde, V. Band. No. 13 and 14, March 28, 1889).

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Clinical Reports.

A Case of Syphilitic Ptosis and Paraplegia—Cure.

By ANGELO FESTORAZZI, M. D., of Mobile, Ala.

Within the last few years, lesions of the nervous system, depending upon syphilitic poisoning, have been especially dwelt upon by many writers. Their effects generally belong to the class of what are termed "tertiary affections;" and the length of time which elapses between the primary disease and resulting nervous disorder, is frequently so great as to cast a shadow of doubt upon their origin. The present case is especially valuable as occurring very shortly after the absorption of the syphilitic poison, and during the time whilst other effects of it were manifest in the system.

W. S., mulatto, came under my care during December, 1889. He was suffering from complete paralysis of the third nerve on the right side. This was attended with slight headache and feeling of sickness. He had no gouty or rheumatic diathesis, nor had he been exposed to cold; but six months previously he had had a chancre upon the penis, which had been followed by sore-throat and a copper-colored papular rash—slight traces of which still remain about the face and shoulders. He was directed to take a Plummer's pill at night, and large doses of iodide of potassium were also administered; a blister was applied behind the ear.

In four weeks the ptosis disappeared; and for a time he seemed well, and resumed his ordinary occupation.

A month later he again applied to me. On this occasion he complained of pains in the back and lower limbs, a difficulty in making water, and a feeling in his legs which he described "as though his feet were made of lead." These symptoms gradually increased, and in the course of a week he could scarcely raise either limb above an inch from the ground; his urine constantly dribbled from him. Sensation in the lower extremities was not completely abolished, but so perverted that he could never tell with certainty what part was being touched.

For this condition of affairs I placed him once more under the influence of the iodide of potash, painting the whole

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length of the spine, night and morning (till it became sore), with a strong solution of iodine; and with these remedies I combined the use of vapor-baths thrice a week. Under this treatment he rapidly improved; and in the course of six weeks he became so well and strong as to be able to resume his position of foreman on a tug-boat.

Proceedings of Societies, Boards, etc.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

April 15th, 1890.—**Conservatism in Nasal Surgery.**

Dr. Charles M. Shields read a paper with this title. He said that the usually prompt results following the recent surgical methods of treating hypertrophic catarrh had, he thought, been followed by a reaction in favor of the too free use of the galvano-cautery, snare, drill, and saw, in nose and throat troubles. He advocated the judicious and proper application of these appliances, and did not consider it conservatism to fail to use them where sensitive nasal creas, or true hypertrophies, were present, or where polypi, exostom, or other growth, required removal; but thought that the majority of the unfortunates who presented themselves for treatment now-a-days were too often confronted with the terrors of these instruments, and that an inspection of their throats and nasal cavities presented a battle-ground that retained the scars and blemishes of the action for years. In nasal catarrh, there were but two conditions in which the galvano-cautery could be properly used—first, where there were true hypertrophies to be destroyed; and, secondly, in the atrophic variety, for an entirely different purpose—*i. e.*, stimulating ulcerated and non-secreting surfaces, as the actual cautery is used for ulcerations on the surface of the body, not *to* the tissues, but just near enough to obtain the stimulation of its heat.

In simple chronic catarrh, or any other varieties, except the two mentioned, he thought that only harm could result from its use, and that it was frequently followed by an erethism of the parts, and an irritation of the entire nervous system. Dr. Shields said that we should never lose sight of the fact that the cicatrice resulting from the use of the galvano-cautery is not healthy mucous membrane, or capable of performing its functions, and that even where such a con-

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dition was to be preferred to stenosis of the nostrils, it was only choosing the lesser of evils.

The excessive use of the cautery often produced cicatrices that ran into an atropuic condition of the parts.

In the recent treatment of *hay fever*, he thought that the largest percentage of cases must be credited to the galvano-cautery; but that fact would not atone for the abuse of the agent in improperly selected cases.

Unless there were sensitive spots that produced reflex effects, or hypertrophies that caused mouth-breathing, the patient should not be subjected to the risk of the loss of the sense of smell, atrophic catarrh, nervous depression, or the formation of cicatricial spots that might produce the very condition we are trying to remove—a sensitive spot from which reflex symptoms are produced. There were two instances reported in which these scars had to be dissected out before the reflex symptom could be removed.

The abuse of the surgical treatment of the throat, the speaker thought, had been carried to even a greater extreme than that of the nasal cavities. There was no one who advocated more than he the removal of *hypertrophied tonsils* that impaired respiration, deglutition, or hearing; but if moderately enlarged tonsils did none of these, why remove them?

If *adenoid growths* produced mouth-breathing, or impaired the voice or hearing, removal was imperative. Dr. Shields stated, however, that in a careful examination of the throats of a large number of children he was surprised to find such a large percentage of instances where some adenoid tissue was present that exhibited no symptom in voice or respiration; and that as this tissue is known to undergo absorption with increasing age, it was unnecessary to remove it where it did no harm.

Fashion with specialists at present referred most of the ill-defined troubles of the throat to the so-called pharyngeal tonsil, as the general practitioner made the liver bear the responsibility of his obscure cases. He thought that many patients presented throats filled with scars in this region that would never have known that they had a pharyngeal tonsil if it had not been the fashion to attribute to that rather indefinite structure most of the evils to which the throat is heir.

After considering the condition which made the straightening of deviated nasal septa desirable, and those that, in his opinion, rendered it unnecessary, the speaker closed his

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remarks with the hope that the undeniably good results of recent nasal surgery should not be disparaged by a lack of proper conservatism that would bring it into disrepute.

TENNESSEE STATE MEDICAL SOCIETY.

APRIL 8TH—FIRST DAY—MORNING.—The Fifty-seventh Annual Session was called to order in Memphis, Tenn., by the President, Dr. Duncan Eve, of Nashville, at 10 A. M. Dr. D. D. Saunders delivered the Address of Welcome. The total attendance was about one hundred registered doctors. This Society meets annually "for business;" so that the social features of this session were *nil.*

Dr. J. A. Swaney, of Gallatin, read a paper on

Incontinence of Urine in Children.

The bladder in infants and young children has a relatively powerful detrusor and feeble sphincter; the sphincter vesicæ has not sufficient resistance in many cases to properly resist the action of the vigorous detrusor. He tabulated the various causes of incontinence as follows: (1.) Excessive acidity of the urine, usually caused by excessive formation of uric acid. (2.) Over irritability of the muscular coat of the bladder, even when the urine is neutral. (3.) Weakness of the sphincter. In such a case, the urine is not passed rapidly or in a full stream, as when the cause is in a forcibly acting detrusor. (4.) From reflex action, any source of irritation in or about the genital tract may be a cause of incontinence. Local examination may discover a balanitis or adhesions between the prepuce and glans penis, with smegna around the corona. Two such cases had come under his observation in the last year. (5.) Too great a quantity of urine, from the child drinking too large a quantity of fluids. (6.) Vesical calculi. (7.) Malformation of the bladder. Several cases have been reported where persistent and irremediable incontinence was induced by one or both ureters opening into the urethra. (8.) Contraction of the walls of the bladder, due to hypertrophy of the muscular layer reducing the capacity of the bladder to one or two ounces. In one case, which came under his observation, the walls were contracted so much that the bladder would not hold more than one and a half ounces of water.

Treatment must depend upon the discovery of the cause in each case. Highly acid urine should be neutralized by al-

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kalies. Acetate of potash is one of the best preparations for this purpose; bicarbonate of potash or soda may be used for the same purpose. Fruits often do well in children old enough to partake of them, as the vegetable acids are changed to alkaline bases in the system. Where the fault is from the detrusor acting too vigorously, belladonna serves as a specific. Five drops of the tincture may be given three times a day at first, and the dose increased by drops, until there is some dryness of the throat and flushing of the skin; then it will control the incontinence. For a lack of force in the sphincter, ergot, in full doses, is indicated. A hypodermic injection, about the ischio-rectal fossa, of five or six drops of the fluid extract, is recommended by Dr. H. D. Chapin, of New York. In all cases of incontinence, tone up the nervous system by such agents as syrup iodide of iron and strychnine in full doses.

A Resume of Surgical Cases in a Country Physician's Practice.

Dr. T. J. Happel, of Trenton, Tenn., outlined his general method of procedure. The nearest approach to "ideal surgery" that it had been his lot to deal with was the removal of what appeared to be a *cancerous degeneration of a nævus or mole* in a lady nearly 93 years old. This tumor, on the left temple, had attained the size of a duck egg, and had developed within less than six months. It was removed under chloroform April 21st, 1889, and the patient was dismissed cured on May 5th. There was no elevation of temperature and less than one quarter teaspoonful of pus was formed.

In all his operations he *uses chloroform*. Theoretically, ether is safer, but much depends upon the manner in which the anæsthetic is used. Both are unsafe in careless hands, chloroform being much more so than ether; but when the respiration and pulse are carefully watched, he considers chloroform as safe as ether. Anæsthesia is much more rapidly produced by chloroform, and much less nausea follows its use. As to mixing anæsthetics, he had no experience, and less faith, as, owing to the different rates of volatization of the ingredients, the patient uses but one at a time in reality.

Dr. Happel summarized his surgical work, and stated his belief in antiseptic surgery so long as it forces upon us greater cleanliness, but he is not yet fully satisfied that the micro-organisms which are supposed to be destroyed by antiseptic lotions, etc., are the causes of the disease. They may be simply sequences. The disease may furnish them suita-

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ble pabulum upon which to grow, and they develop as a result of the disease. Perhaps, after all, antiseptics only prevent the furnishing of this *tertium quid* on which the bacilli and micrococci grow and thrive.

This paper drew out considerable discussion with reference to chloroform and ether, the general opinion being that chloroform, all things being considered, was as safe, if not safer, than ether.

During the afternoon, Dr. G. W. Drake, of Chattanooga, read a paper on

The Triune Man.

He said that mind, matter, and force, are each a general entity specialized in man and individualized in a particular man: the three united into one constitute the triune man. The elements of matter, as a general entity, as found in the earth, are shown to be the same as those found in the body of the triune man. Thus is established man's kinship to the earth, and the truth of the scriptural account of his origin. The carbon, hydrogen, oxygen, nitrogen, and other elements of the living tissues, have a more complex grouping in the human body than in the chemical compounds of the earth, but this is attributable to the action of a higher force than chemical affinity—namely, nerve force. Force is as truly a separate and individual entity as matter and mind, and existed as a general entity away back "in the beginning." Gravity was, in all probability, the original force, of which all the rest are evolved correlates, including nerve force. The normal circulation of nerve force through the various tissues and organs of the body is necessary to health none the less than the circulation of the blood. Respiration, digestion, the circulation of the blood, absorption, and tissue metabolism, all wait on the circulation of this subtle force, and the writer would like to introduce into the literature of physiology the phrase circulation of nerve force alongside of Harvey's expression, "circulation of the blood." The disturbance, by friction, of the molecules of certain bodies, and the shifting of atoms of certain other bodies, as the result of chemical action, causes the liberation of electricity; so, in all probability, by the molecular changes constantly taking place in the living body, nerve force is liberated, and, flowing to the centre, there accumulates as in storage-batteries, ready to be diffused throughout the system.

The writer then describes the transmutation of physical

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force into nerve force, and its conduction to the sensory centres of the cerebrum. Force opens the petals of the violet, and scatters its perfume upon the air, to be conveyed to the peripheral cells of the olfactory nerve, and thence to the brain, where it is perceived as a sensation of smell. Force paints the rose, and is conveyed to the peripheral cell of the optic nerve, and thence to the brain, where it is perceived as a sensation of sight, etc.

The peripheral and central cells determine the kind of sensation; the intervening fibre is only a conductor, as a wire between telegraph stations. The writer speaks of mind as occupying the throne of the human microcosm, supervising and directing matter and force. He considers all minds equal—those of a Newton and a Patagonian giant, male and female, infant and adult—and are the exact prototypes of those of Adam and Eve. The differences in the intellectual manifestations of individuals are attributable to the degrees of the *quality* of their individual brains, whether quality be measured by depth of convolutions, chemical composition, or otherwise. The mind is perfect; the brain is never complete. As a master artist can only paint a perfect picture on a perfect canvas, so mind can only impress perfect images on a perfect brain, and the nearer the brain of an individual approaches perfection, the better the images of the mind, the grander the conceptions of thought. Mind, matter, and force, meet in the brain, and make "the triune man."

This was followed by a contribution on *Hypermetropia*, by Dr. N. T. Dulaney, of Bristol.

Dr. P. H. McKinnie, of Hickory Valley, read a paper on *Pneumonitis and Its Treatment.*

Endocarditis and Its Differential Diagnosis.

Dr. J. A. Witherspoon, of Columbia, said that the correct diagnosis of heart affections depends upon a thorough understanding of its anatomy and physiology. We should not be contented with the unscientific diagnosis of "heart disease." If the early manifestations of the disease were recognized early and proper treatment instituted, fatal sequelæ might be prevented.

Endocarditis occurs in three varieties, viz.: *exudative, ulcerative,* and *interstitial.* Exudative endocarditis occurs usually in those diseases in which there is marked dyscrasia of the blood, where that fluid is altered in its histological proportions or physiological elements, and especially

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in acute articular rheumatism (about 33 per cent. of such cases). It may occur in any disease in which there is a morbid state of the blood, such as the exanthemata, essential fevers, diphtheria, nephritis, pyæmia, etc. It may occur, as a primary disease, from exposure to cold, violent efforts, blows or other injuries to the chest, and it sometimes occurs without any discoverable cause. Its most frequent site is upon and around the valves. Hence the liability to the production of valvular troubles, generally the left side of the heart. Endocarditis is usually associated with signs of acute paricarditis, swollen and painful articulations, and the acid sweats of rheumatism.

The *differential diagnosis* between endo- and pericarditis is not difficult, were they not so often associated together. In *pericarditis* we have no murmur, but a to-and-fro friction sound; the impulse of the heart is more feeble and distant, and in the later stage, marked enlargement of percussion dullness. The sounds of the heart are very feeble and muffled in pericarditis, whereas they are even more distinct—except at the site of the murmur—and normal in *endocarditis*. The only other disease for which endocarditis may be mistaken, is *aortitis*, especially if the inflammation is in the first part of the aorta. The diagnosis between them is very often impossible to make, the only distinguishing features being the increase of pain which extends along the trunk of the vessel, with marked pulsation and a blowing murmur, which is transmitted in the direction of the blood current, and a diffused sensitiveness of the arterial system.

There are two complications of endocarditis which cause entire change of symptoms. One is, that the fibrin which deposits upon the inflamed endocardium may be so large as to form a clot, and if this clot is large enough, the symptoms of obstructed circulation to a most alarming extent manifest themselves by a condition of collapse; the skin becomes cold and cyanotic, the pulse thready and weak, and the heart's action exceedingly irregular, with great struggling for breath; the murmur becomes indistinct, and cardiac dulness is slightly increased; fainting spells alternate with nausea, vomiting, often delirium, and death comes on in a very short time and closes the scene of most terrible suffering. Then, too, we may have a small clot of fibrin or vegetation from the valves, washed into the circulation and carried to different parts, when the well-known signs of emboli will appear.

Ulcerative endocarditis is usually septic in its origin, and

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is of rare occurrence. This fatal type of the disease is manifested by great prostration, with marked typhoid symptoms, irregular chills, profuse sweats, extremely rapid pulse, dry, red tongue, muttering delirium, followed by vomiting, diarrhœa, deep jaundice, and stupor; marked tenderness found over liver and spleen by palpation; great dyspnœa with Cheyne-Stokes respiration, and a scanty, highly-colored albuminous urine.

During the evening session, Dr. Duncan Eve, of Nashville, delivered the *Presidential Address*. He selected for his subject "Recent Progress in Our Profession."

Dr. Bayard Holmes, of Chicago, read a paper on *Secondary Mixed Infection in Scarlet Fever*. (See page 88).

Dr. W. F. Glenn, of Nashville, read a paper on

Phenique Compounds in Germ Diseases.

He said that the experiments of Pasteur, Tyndall, and others established the fact that many, if not all diseases, are due to the presence and active development of living germs in the system. The experiments of Dr. Calvert prove that the salts of quinine in solution will destroy all vegetable fermentation, the salts of mercury in solution all animal fermentation, and a solution of pure carbolic (phenique) acid will destroy both vegetable and animal fermentation. Can we put a sufficient amount of carbolic acid into the blood to arrest and prevent the growth of disease germs with safety to our patient? Yes. The accidents heretofore attributed to the administration of carbolic acid have been due to its impurity, more than to the quantity given. If absolutely pure, it is a safe and efficient remedy; if in the least degree impure, it is a very dangerous one. Dr. Glenn has used Dr. Declat's preparations of phenique, both internally and externally, with gratifying results for the last ten years. During this time he has employed phenique acid as his chief remedy in all cases of malarial, typhoid, and scarlet fevers, diphtheria, erysipelas, blood-poison, as a local application to all wounds, and has found the result so satisfactory that there is little left to be desired. In May, 1886, he removed a scirrhus breast, the incision being ten inches in length, extending into the axilla. The wound was dressed with a one to four per cent. solution of glyco-phenique, with the result of no suppuration, no unpleasant odor, and perfect healing in ten days. Since he has been following this plan of treatment—in typhoid fever, for example—he has never had a diarrhœa to occur in any of his

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patients; never a hæmorrhage from the bowels; never a serious tympanites; never a death. He believed that with phenique acid, and antifebrin as an aid, physicians possessed the treatment, *par excellence*, of all zymotic diseases.

Dr. B. P. Key, of Chattanooga, read a

Report on Seven Cases of Ovariotomy in One Year.

The operation was performed for acute peritonitis in one case, and the rest were ovariotomies. Ovaries diseased in all these cases. In two the patients were in the midst of the worst possible surroundings, in small rooms, with cob-webs in abundance. The only antiseptics used in all the cases was the antiseptic spray (carbolic acid, 20 per cent.), one hour before the operation. This was stopped when the operation commenced. The peritoneal cavity was thoroughly irrigated with hot water (110° F.) every time. In one case, where there was extreme shock, the hot water had a decided effect in bringing about reaction. The application of hot water to the peritoneal cavity for the purpose of bringing about reaction after shock, in abdominal operations, is advocated and practiced by Gill Wylie as *the* remedy, and its value was well-illustrated in this case, as the patient was at death's door when the water was applied.

In one case of ovarian abscess the patient died. The others all had an uninterrupted recovery. In one case, only one ovary was removed. The case was one of fibro-myoma The other ovary was apparently healthy, and as it was in the person of a young woman it was left. After a lapse of sixteen months the patient reports that she is in perfect health, and has no symptoms of her former trouble. In all cases, the ultimate result was satisfactory, except in the case of death referred to above. The case of peritonitis excited the most discussion.

Blindness.

Dr. Frank Trester Smith, of Chattanooga, stated that from 1870 to 1880, the number of blind in the United States had increased 140 per cent., while the population had increased but 30 per cent., as shown by Howe. He reviewed the report of the Committee from the New York State Medical Society on this subject, and called attention to what was done in Holland, England, and other countries, for the prevention of blindness. The paper dwelt briefly on ophthalmia neonatorum, trachoma, and glaucoma, as causes of blindness, and advocated a line of treatment: For ophthal-

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mia neonatorum, cold applications (on cloths) silver nitrate solution (not over gr. x ad ℥j), and cleanliness; for trachoma, blue stone mainly; for glaucoma, the point was raised that the general practitloner should be able to make the diagnosis in *well-marked* cases, as these were often diagnosed as cataracts, and allowed to become hopelessly blind for want of timely treatment. They should be referred to the oculist at an early date. Where a patient was blind, and had any clear cornea and perception of light, he should have the benefit of an expert examination.

Dr. J. S. Cain, of Nashville, read a paper on

The Use and Abuse of Antipyretics.

Antipyretics are therapeutic agents to prevent accumulation or storage of animal heat within the human economy, above the normal standard of health—in short, agents that prevent or reduce pyrexia. Pyrexia is the result of two distinct processes—namely, increase in heat production, and decrease in heat dispersion, either acting singly or together. When these two processes exist in perfect equipoise, so that the body temperature remains practically at 98.5° Fahr., the temperature is "normal." Certain disease-producing agencies gaining admission into the economy through the lungs, stomach, etc., and acting through the nervous system, interfere with this equalizing process, and result in the accumulation of an undue amount of heat—in the tissues and blood, and constitute fever.

The views made prominent by hydrotherapists, that high temperature in fever is the one great condition to be combatted, and that it is the cause of the various changes in the organs which endanger life, he did not believe was sustained by the majority of German thinkers. There is danger from long continued hyperpyretic temperature, but the symptoms of degeneration of the organs above mentioned seem—to use the language of Dr. von Ziemssen—to be "not the effects of high temperature, but coincident effects of the cause of the fever, and the cause is infection." Pyrexia is not only often an unimportant factor in disease, but, in certain fevers, it is one of nature's efforts at repair which should be encouraged; and to combat or antagonize it, in the sense of arresting its generation, is to try to defeat the very conservative and reparative processes by which nature is struggling to preserve the life of the patient, against the spoliations of the doctor.

In the theory that tissue-waste material does contribute

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largely to the process of oxidation, and, by its excessive or diminished production, does modify heat elaboration, he is sustained by the best authorities, among whom he mentioned Dr. N. S. Davis, Liebermeister, Wunderlich.

Dr. Senator has detailed his opinions upon the febrile process, as derived mainly from exact experiments upon metamorphosis. He says: "Rise of temperature is only one symptom, and does not constitute the essence of fever. Its explanation has not yet furnished any theory of fever, because, underneath this symptom, very different morbid processes are combined, and because there are, in fever, other important processes, independent of the elevation of temperature." Amongst these Dr. Senator considers "chiefly the special tissue changes," and further considers that "tissue change is an important process in the elevation of temperature," and that oxidation is the demonstrable, though probably not the sole, source of heat."

Dr. Brunton divides antipyretic remedies into two main classes—those which lessen the production of heat and those which increase its loss. The first class is subdivided into those remedies which lessen production by arresting tissue metamorphosis; at the head of this class stands quinia. Also those which lessen oxidation by controlling the circulation and cutting off the oxygen supply which is furnished alone by the blood; these are usually nerve and heart sedatives, and means which retard the active flow of blood. They are again divided into general and local remedies. Of the former class (leaving out venesection now no longer practised), are antimony, ipecac, aconite, veratrum viride, gelsemium, and the new products of coal-tar, antipyrin, antifebrin (or acetanilid), phenacetin, etc. The therapeutic action of these latter remedies in controlling temperature is not well-understood; but when we consider their direct depressing effects upon the medullary and spinal centres, and observe the marked cyanosis nearly always attending their free administration, the conclusion is almost irresistible that they retard oxidation, and, by their powerful sedation, lessen the supply of oxygen to the tissues, like the other agents mentioned, and lower temperature by arresting combustion.

They also possess other and valuable therapeutic properties. Their analgesic, antiferment and antiseptic properties render them very potent agents for good in certain cases, but they are as equally potent for evil when improperly or untimely used.

Dr. W. C. Bilbro, of Murfreesboro, read a paper on the *Abuse of Quinine.*

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Dr. A. G. Sinclair, of Memphis, read a paper on

Suppurative Inflammation of the Middle Ear.

To the general practitioner, there is probably no form of aural disease more troublesome than this, and certainly none which, from its frequency and the gravity of some of its possible results, more urgently demands his careful study; but there is also probably none which the progress of otology in comparatively recent years has rendered more amenable to scientific methods of treatment. It is true, that a certain percentage of cases of the chronic form still refuse to yield to the otologist, the disease obstinately pursuing its course, undermining the health of its victim, and too often ending his life by pyæmia, septic infection, meningitis, cerebral abscess, or even hæmorrhage, by erosion of the walls of one or the other of the great blood-vessels lying in close proximity to the drum cavity. A very brief consideration of the anatomy of the tympanum and adjacent parts will show why the disastrous results above named are liable to follow any severe inflammation in this cavity, and leave us to wonder that any intelligent medical man could be content to leave untried any known means for the removal of so grave a menace, not only to the health and hearing, but also to the life of every sufferer from these affections.

Sir William Wild has well said that "when a suppurative inflammation of the middle ear has once begun, we can never tell how, when, or where it will end, or what it may lead to."

The roof of the tympanum separates it from the cerebral cavity, and, aside from the soft tissues, consists of a layer of bone not thicker than writing paper. Through this extends the petro-squamosal fissure giving passage to branches of the middle meningeal artery, and sometimes even to a process of dura mater. A portion of the inner wall, equally frail, separates it from the internal carotid artery, while the floor, hardly more resistant, covers the jugular vein. But in one or more of these walls the bony structure is sometimes wanting, and so there remains only a delicate membranous barrier to the passage of disease-germs, or morbid processes, into the very citadel of the sufferer's life. Is not the physician, knowing these things, much to blame when, as often happens, he dismisses acute or painful cases with a prescription for laudanum and sweet oil drops for the ear—a preparation nasty, sticky, and, from its weight,

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irritating to the inflamed drum-head, instead of soothing; or, worse still, in most cases a poultice—an agent which promotes the softening and breaking down of the membrana tympani, the very thing to be prevented, if possible? Or, if there be a discharge, a prescription for astringent drops, and instructions to syringe the ear?—very well, perhaps, but for the fact that, among the laity, there are very few who know how to syringe an ear properly, and usually those who try, do so with a glass syringe, an utterly useless instrument. This sort of advice and treatment is harmful rather than otherwise, and the disease, uncontrolled, runs riot until the hearing becomes irretrievably impaired or the life of the sufferer is sacrificed. Happily, however, from a more correct appreciation of the importance of aural diseases, and a growing knowledge of the means of combatting them, the record of bad results is growing shorter year by year.

The most common cause of acute inflammation of the tympanic cavity is a cold in the head, so-called—an acute inflammation of the nasal mucous membrane. The exanthematous, and various other forms of fever, are additional causes, with only rare instances chargeable to inflammatory processes in the external auditory canal.

Seen in the first stages of an acute inflammation of the tympanic cavity, the drum membrane presents an elevation of its cutaneous layer, and great congestion of its blood-vessels. Later, the meatus has a sodden and whitish appearance, and often contains more or less moisture, while about the orifice the ear is tender and somewhat swollen. Before perforation, there is seen with the mirror a bulging outward of the drum membrane, which is caused by the accumulation of mucus or pus, or both, in the tympanum; after perforation, if the middle ear be inflated by any of the methods in vogue, a bubble can be seen to form over the opening, or the well-known "perforation whistle" can often be distinctly heard.

The most striking symptom of acute inflammation of the middle ear is pain, at first continuous, and later paroxysmal in character, and usually more severe at night. In adults, and children old enough to talk, there is of course no difficulty in determining its location, but in young infants this is not so easy. Often, however, in making pressure about the ear, tenderness will be discovered, or filling the meatus with warm water, or even tobacco smoke, will have a soothing effect, and so aid in the diagnosis. Other symptoms are

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a sensation of fulness in the ear, tinnitus, and more or less impairment of hearing. In an otherwise healthy child, the acute form will usually run a course of ten to fifteen days' duration, ending in perforation of the drum-membrane and recovery, or the brain becomes involved and death follows, or the perforation may remain unclosed. In adults recovery does not usually occur in less than from three or four to eight weeks. In any case the disease may pass into the sub-acute or chronic form, and where there is constitutional impairment, this is very liable to occur.

Treatment.—In acute otitis media, the remedy first in order is either moist heat, applied by means of warm water poured into the ear from a spoon or test-tube, or irrigation with a fountain syringe; or dry heat by means of bottles filled with hot water, or small bags of heated salt or hops laid around or on the ear. Should these remedies fail to overcome the pain in a very short time, local depletion, by far the most potent remedial agent in these cases, is to be employed. The artificial leech may be used, but a couple of natural leeches applied to the tragus are much more effective, because at this point blood-vessels, supplying the tympanum, are reached, and hence the inflamed tissues can be much more fully and promptly depleted than from any other accessible point. Often an agonizing pain, that has persisted for days, will yield, and the patient perhaps fall asleep before the leeches drop off. Opiates are often of little use before the bleeding, and are as often not needed after it. Where the contents of the tympanum cause bulging of the drum-head, a free incision should be made through the membrane. This will usually promptly subdue the pain, and will aid in preventing great destruction of the drum-head, but requires for its performance some skill in operating and accurate anatomical knowledge. The subsequent treatment includes inflation of the middle ear to drive out such inflammatory products as it may contain, careful cleansing, and, when a discharge begins, the use of the various astringents and antiseptics, of which sulphate of zinc and boracic acid are among the best.

Sub-acute cases usually result from the acute form. Their treatment consists of careful cleansing with absorbent cotton or the syringe, inflation of the middle ear, and the use of astringents and antiseptics after removal of granulation, should any be found.

Chronic suppurative inflammation of the middle ear is also commonly, though not always, the result of acute otitis

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media. Its chief symptom is a more or less persistent discharge of pus from the ear, varying in quantity from a few drops to a drachm or more in twenty-four hours. Perforation of the drum-head is always present. In uncomplicated cases there is no pain. The dangers attending it have been already alluded to, and are so many and so grave that many insurance companies refuse to accept as risks persons suffering from this disease.

In the treatment, first and above all things else, stands thorough cleansing of the diseased mucous membrane of the tympanic cavity; and this cleansing is often by no means the simple matter that it is generally supposed to be, and therein, he believes, lies the most common cause of failure in treatment. After careful syringing with warm water, air should be forced through the Eustachian tube outward, for the purpose of expelling from the drum cavity any remaining inflammatory products, and the syringing then repeated. Even then, in some cases, inspissated pus may remain in the bottom of the cavity, especially if the perforation be small, and, so long as it does, topical applications will accomplish little. These hardened accumulations may be softened by dropping into the ear a few times a five per cent. solution of carbonate of soda, after which syringing and inflation become effectual. After this thorough preparation of the part, local medication accomplishes much; and of the various agents employed solutions of sulphate of zinc or alum, of the strength of 1 per cent., and nitrate of silver 1 per cent. to 15 per cent., or even stronger, are among the most useful. Boracic acid is, and has been, much employed, but while it is of service in some cases, in his hands it has proved of less value, whether used dry or in solution, than the agents above named. Iodoform is useful, but its odor is so unpleasant that he resorts to it only when other remedies fail.

In many of these cases, granulations or polypi will be found springing from the tympanic mucous membrane. Their removal is an indispensable part of the treatment. Fuming nitric acid, chromic acid, absolute alcohol, and the curette, are the means used for the destruction of granulations, and the snare offers the safest method of removing polypi.

Since, in very many of these cases the morbid process involves the nose and throat, these parts must receive careful attention, and the keenest investigation of the general health of each patient should never be omitted, for upon the cor-

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rection of systemic derangements the success of local therapeusis often depends.

Dr. A. J. Swaney, of Gallatin, read a paper on *Incontinence of Urine in Children.*

Fractured Thigh; Easy Method of Treatment without Long Splint or Pulley.

Dr. J. W. Davis, of Smyrna, after a minute history of a case of thigh fracture, its treatment, etc., gave a detailed account of the method of treatment as practiced by him, and some three of his neighboring physicians. Place the patient on a bed, with a folded quilt under him; let the fractured thigh be semiflexed on the body, and the leg on the thigh; prepare an eight-tailed bandage and three pasteboard splints the length of the well thigh, softened a little with water; put the bandage under the thigh, with the tails or strips well and smoothly laid out; take hold of the knee, with an assistant to hold the hips, and make gentle traction, with the thigh and leg both half flexed, until the bone is well-adjusted; then bring the thigh down in the bandage, with the outer side resting on the bed. Now, with the splints placed on the thigh next to the skin, the bandage is put on, by placing alternate layers or strips well over each other; fasten the bandage well, and put a soft small pillow under the knee. The patient can now rest easily on his side, with the well leg thrown over in front of the fractured one, or he can turn on on his back, always keeping the fractured thigh on its outside, half flexed on the body, and the leg on the thigh; this will keep the shaft of the fractured bone in a line with its natural position. The dressing must be tightened up once a week. Always, when doing this, the knee must be firmly grasped, and gentle traction made, to bring the thigh bone out to its full length. The muscles soon cease to contract, and, with care, you will rarely ever have a shortening of the bone. The blood-vessels lay so deep under the muscles that there is no danger of strangulation or congestion. The calls of nature can be attended to without trouble with the patient on his side, thighs flexed, etc.

Dr. W. E. Wilson, of Pulaski, Tenn., read the report of

A Case of Hysterectomy for a Large Subperitoneal Fibroid.

April 25th, 1889, he was called by Dr. G. D. Gray, of Giles county, to operate on a colored patient (aged 55 weight less than 100 pounds, married, primipara,) for an abdominal tumor. The patient was in a clean, dark cabin;

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in fine spirits, and fairly good condition, though greatly reduced in flesh and strength by the pain and wasting incident to the disease. On examination, a large, smooth, symetrical tumor was discovered, the abdomen presenting the appearance of about a seven months' pregnancy. The exact nature of the tumor was not determined, but it was agreed by all that nothing but its removal would save the patient. She mounted the table with fortitude. The pubic region was shaved, and the abdomen thoroughly cleansed, and the ordinary exploratory incision revealed a fibroid tumor, about the size of a two-year-old child's head, growing in the posterior wall of the uterus. It so completely overshadowed the womb, that its enucleation was impracticable, and hysterectomy was agreed upon. The incision was extended to the pubis below, and two inches above the umbilicus, through which the tumor was drawn with considerable difficulty, after breaking down the numerous strong adhesive bands binding the parietal walls and abdominal viscera to the tumor. Many of the points bled freely, but it was not deemed necessary to apply the ligature to any of them. The right broad ligament and tube were ligated and severed, but the left was so closely identified with the tumor that it could not easily be separated from it. The cervix, which was very little, if at all pedunculated, was embraced in a Smith's pile clamp, as close to the tumor as possible, and severed by a few strokes of the scalpel, and the tumor and body of the uterus went to the tub. The stump was then thoroughly seared by means of a Paquelin cautery, and a needle, armed with a strong double ligature, was passed through beneath the clamp, and both segments carefully ligated. The clamp was then removed, with no sign of hæmorrhage from the stump. The abdominal cavity was made clean by sponges wrung out of hot carbolized water. We did not irrigate the cavity, and avoided as far as possible the entrance into the cavity of the carbolized water. The stump was then stitched into the lower angle of the wound by two deep silver sutures, by the side of which an ordinary perforated drainage tube was passed well down in Douglas's *cul-de-sac*, and the remainder of the wound closed with wire and silk sutures, and dressed with carbolized gauze and absorbent cotton, and the bandage applied and our patient put to bed.

After the nausea and prostration incident to the shock passed off, there was not an unfavorable symptom. On the second day the temperature reached 101° F., after which

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time it was never over 99°. The pulse was never over 100 per minute. The wound above the drainage tube healed by first intention without the slightest appearance of pus. There was very little discharge from the tube before the sixth day, when a puro-sanguinolent discharge appeared. After the eighth day it became less in quantity, and assumed the appearance of healthy pus. The tube was gradually withdrawn each day until the eleventh day, when it was finally removed. The cavity was not washed out at any time, as there was never the slightest evidence of septic trouble or peritoneal inflammation. On the eighteenth day he removed the two silver sutures, and the ligatures came away, bringing with them, to his great gratification, the remnants of the stump. The patient progressed to perfect recovery without an unfavorable symptom.

After she was well and returned to household duties, she left off the abdominal support contrary to positive instructions, and has, as a consequence, a slight ventral hernia. A year after the operation she is strong and well, except the hernia, and, according to her statement, can do more work than she has been able to do for fifteen years.

Case of Colles' Fracture.

Dr. J. W. Brandon, of Stribling, Tenn., read a report of a case. The only peculiar feature in the case was the formation of an exostosis about the size of a lemon on the anterior aspect of the forearm, near the wrist joint, having sprung from the site of the fracture—the result of exuberant callus.

Foreign Body in Child's Stomach.

Dr. S. W. Sanford, of Henning, reported this case—first, on account of the age of the child; second, the character of the foreign body; and third, the manner in which the stomach rid itself of the offending substance. He was called to see a child aged ten months. The patient had fever and diarrhœa and a swelling over the stomach, which he thought to be an abscess. He prescribed the usual remedies for the fever and diarrhœa, and ordered flaxseed-meal poultices for the swelling, and told the mother to let him know when the abscess was ready to be lanced. Two days later, the father started for him, but met another physician passing his house, and called him in. He concurred in the diagnosis and lanced the abscess. It discharged profusely. For the next two weeks the father consulted with Dr. S. several

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times about the child, and he was finally called again, when he found the child still with diarrhœa and fever and greatly emaciated. When the abscess had been lanced it had never closed, a small opening remaining and discharging. But just before Dr. Sanford arrived the mother discovered something protruding from this small opening, and with a pair of twezers pulled a broomstraw out the length of his forefinger. At this visit Dr. S. learned for the first time the following history: A few days previous to his first visit the child was playing in the floor. The mother discovered that it was choked, and found and removed several straws from its mouth and throat. The child cried for some time, but nursed and finally went to sleep, and nothing more was thought of the accident. After the removal of the straw from the opening in the abscess the child made a rapid recovery.

Importance of Early Treatment of Middle Ear Diseases

Was the title of a paper by Dr. N. C. Steel, of Chattanooga. He wished simply to emphasize the importance of more attention being paid to diseases of the middle ear, and especially to the early treatment of such diseases. The middle ear is more frequently diseased than any of the other grand divisions of the ear, and the diseases are more serious than those of the outer ear, and more amenable to treatment than those of the inner ear. These middle-ear diseases are rarely primary, but secondary to other diseases, such as typhoid fever, pneumonia, small-pox, measles, scarlet fever, tonsilitis, rhinitis, and pharyngitis. The Eustachian tube is the great highway along which disease travels to the middle ear. He then spoke of the great indifference of the laity and many physicians to diseases of the middle ear. He had heard of physicians who told parents that a discharging ear served as a "drain to the system" of a child, and need not be cured. Frequently, in consequence of the deluding advice that the child "would outgrow it," many a child had "grown" into hopeless deafness, who might have been saved this great calamity by early treatment. Great numbers of deaf people, young and old, date the beginning of their deafness back five, ten, fifteen, and even twenty-five years. Some of these are "running ears," but the most of them are of the non-suppurative variety of middle ear disease, and are largely hopelessly deaf now. Early treatment in their cases was neglected. Of course the presumption all along is that the treatment used should

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be proper treatment. This leads to the suggestion that in treating diseases of the middle ear it is imperative that careful attention be paid to the throat, nose, and naso-pharynx. To disregard this suggestion is to fail largely in treatment.

Dr. W. B. Rogers, of Memphis, read a report of *Five Cases of Epulis.*

OFFICERS FOR 1891.

President—Dr. G. A. Baxter, of Chattanooga.

Vice-Presidents—Dr. S. W. Sanford, of Henning; Dr. W. G. Ewing, of Nashville; N. T. Dulaney, M. D., of Bristol.

Secretary—Dr. D. E. Nelson, of Chattanooga.

Treasurer—Dr. J. P. C. Walker, of Dyersburg.

Place of Next Meeting—Nashville, Tenn., second Tuesday in April, 1891.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

This Association convened in Birmingham, Ala., Tuesday, April 8th, and was in session through Friday, April 11th. About 200 were registered as in attendance. The good effect of thorough medical education of doctors, as tested by Boards of Medical Examiners in the State, and the influence of thorough organization, are well illustrated by the professional tone of the members of this Association.

Dr. C. H. Franklin, of Union Springs, was the President in the chair. and Dr. T. A. Means, of Montgomery, the Secretary, was at his post.

After prayer, and the addresses of welcome by Hon. J. J. Banks and Dr. W. H. Johnson on the part of the profession of Birmingham, the President delivered his annual message. He stated that of the 1,580 licensed practitioners in the State of Alabama, 954 were members of various Medical County Societies represented in this Association.

After other routine work, Dr. E. H. Sholl, of Birmingham, presented the report of the committee appointed to suggest a plan for the establishment of a *Home for the Widows and Orphans of Physicians and for Superannuated Physicians.* The report recommended that each member of the County Medical Societies contribute $1 or more until

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such time as the accumulated fund in the hands of the Association shall be sufficient to carry out the desired plan.

Dr. Peter Bryce presented the *Report on Contract Practice*, which, in brief, recommended that contracts with corporations, etc., under certain well-defined circumstances, were allowable.

During the night session, Dr. Henry Inge, of Mobile, delivered the "Address to the Public and Profession," selecting as his subject "*The Physician as a Factor in the Progress of the State in which He Resides.*" He made many good points of value—suggestive to the doctor, and instructive to the laity.

The evening was concluded by music and recitations by some of Birmingham's gifted daughters.

SECOND DAY.—After the opening exercises of the morning, call was begun for papers.

Headache and Neuralgia the Result of Refractive Errors.

Dr. Benjamin J. Baldwin, of Montgomery, stated that ophthalmology has kept well abreast in the progressive march with its correlative branches. A number of young workers deserve praise for directing attention to the subject of eye-strain as a factor in the causation of headache and neuralgia. He is not an unconditional follower of Dr. Stevens, nor does he go into the battle lately raging between Dr. Stevens and the New York Neurological Society on the subject of peripheral irritation in the eye as a cause of chorea and epilepsy. In fact, he confines himself principally to personal observations, which deal mostly with internal eye-strain in connection with anomalies or refraction. Perhaps Dr. Stevens claims too much for his treatment of chorea and epilepsy, but he does not see how any fair-minded investigator can deny him praise—for he has, by his persistence and ingenuity, directed the attention of the profession to a class of important eye-troubles which had hitherto been very generally overlooked or incorrectly diagnosed.

Dr. Baldwin does not question that many forms of intractable headaches and neuralgias are the result of eye-strain due to a faulty construction of the eye-ball. Accommodation is accompanied by contraction of the pupil and convergence of the optic axes. He directs attention especially to the contractions of the ciliary muscle, as here is the point from which the irritation principally arises. High muscular tension, continued for any length of time in any part or system of muscles, will result in great fatigue, wor-

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ry, and even pain. Why, therefore, is it not to be expected that in conditions of the eye, where prolonged contractions of the ciliary and internal recti muscles exist, there will not follow headaches, dimness of vision, muscular weariness, and confusion? He has, in his own experience, produced headache, dimness of vision, and vertigo, in 50 seconds, by directing patients to look intently at the finger placed two and a half inches in front of the nose. This is a simple, but exaggerated way in which to demonstrate the effects of muscular tension on the nervous system. The three conditions of the eye in which we have these muscular contractions are hypermetropia, myopia, and astigmatism. In the eye of the *hypermetrope* the refractive power is too low, and parallel rays of light entering such an eye would be brought to a focus behind the retina. An effort of the accommodation is, therefore, required to focus such rays at a nearer point, and give distinct vision. How much greater is the strain upon the ciliary muscle when near objects are looked at? In the hypermetropic eye there is never any rest for the ciliary muscle as long as the lids are open; and, consequently, the eye never has the opportunity, as does the normal eye, of periods of rest in viewing distant objects, and regaining its strength after long-continued close work. Its ciliary muscle is, therefore, always in a condition of strain, which, after prolonged worry and over-work, will undoubtedly lead to headache, neuralgia, mental confusion, dizziness, and even nausea and vomiting. By correcting the error of refraction, the muscles are relieved of this unnatural tension and contraction, and the eye is enabled to do its work with ease and comfort.

It must be remembered that the eye is very bountifully supplied with nerves from the cranial and sympathetic system. No other organ is so intimately connected with the nervous centres, and none which has so many cranial nerves distributed to it, and nearly all these nerves in strong relationship in their origin. The ever-active muscle, the ciliary, is supplied by the third nerve. This nerve arises from a section of gray matter under the aqueduct of Sylvius, and the nucleus of the fourth nerve is a continuation of this tract of gray matter, while both are united with the sixth pair by a set of posterior horizontal fibres, and there is a strong probability of the relation between the fifth and optic nerves. Increased action of the centres of the fifth alter the sensibility of those for vision, and Hutchison has report-

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ed a case in which photophobia was produced by inflammation of the cornea in a blind eye.

In reviewing the connection and association in origin, the intimacy in function and proximity along their course of distribution, how is it possible not to conclude that an interruption or annoyance to the function of one of these eye-nerves may not compromise, more or less, the action of them all, and finally lead to serious nervous complications?

Dr. Baldwin has seen cases with constant headaches and neuralgia, with occasional spells of blindness accompanied by dizziness, vertigo, and nausea, following the slightest use of the eye, almost instantaneously relieved by the correction of the refractive error. He does not wish to convey the idea that all cases of headaches and neuralgias are due to errors of refraction—far from it; but these refractive troubles play a most important part in their production, and it is well to eliminate the eye as a factor in the beginning of an investigation as to the cause of headache. It not infrequently comes to the notice of specialists where prolonged and useless medication has failed to cure headaches, which are quickly relieved by the proper adjustment of glasses.

The Treatment of Local and General Peritonitis.

The above is the title of a paper read by Dr. W. E. B. Davis, of Birmingham.

From a study of the experiments of Pawlowski, Grawitz, Wegner, and others, he thinks the following points pretty well settled:

First. Simple peritonitis, when caused by a sufficient quantity of a chemical irritant, will produce death by the extent of the inflammation.

Second. Simple inflammation may terminate in septic peritonitis, by producing a weakened condition of the walls of the intestines, which permit the passage of septic germs from the intestinal canal into the peritoneal cavity.

Third. While pathological germs in small quantity may be absorbed by the healthy peritoneum, without producing a peritonitis, the same quantity combined with a chemical irritant may produce a violent inflammation—the irritant having prevented the absorption of the germs and caused the exudation of a nutrient fluid for their multiplication.

Fourth. Large quantities of septic fluids and microbes always produce suppurative peritonitis; yet, a small quantity of either may be absorbed and destroyed, unless the peritoneum has been weakened by antecedent pathological changes.

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Fifth. A septic fluid may gravitate into dependent parts of the peritoneum, and become shut up, either by plastic inflammation, or by a coil of intestine, and thus be prevented from producing diffuse peritonitis, but after a time this may rupture and produce death from general peritonitis.

Sixth. The germs of septic peritonitis will be found in the kidneys and other organs of the body, and in greater quantities, according to the extent and duration of the inflammation.

Seventh. The condition of the peritoneum, and the nature and quantity of the product, will determine the rapidity of the inflammation, which usually ends in from forty-eight hours to six days, but death may be produced from shock in a few hours. Tubercular inflammation is always slow in its progress.

From a consideration of the foregoing principles, he says the following indications for treatment must be arrived at:

1. Promote absorption of the inflammatory products of simple peritonitis as rapidly as possible, and thus relieve the inflammation and prevent the possibility of septic peritonitis.

2. In the early stages of peritonitis, whether simple or septic, where the cause cannot be determined, hasten the absorption of inflammatory products, etc., with purgatives.

3. When medical treatment fails to give relief, septic fluids should be removed by operative procedure.

4. In localized peritonitis, with circumscribed pus formation, the pus should be removed and the abscess cavity drained.

5. In acute septic peritonitis, operative procedure must be adopted early, or there will be no chance of recovery offered by the operation, as the inflammation will become more extensive the longer it continues; and, too, there will be so great a quantity of septic germs absorbed into the system, that death will result from toxæmia, even though the local inflammation should be remedied by a late operation.

He quotes from Habershon and others, and states that it has been demonstrated that, in the large majority of cases, peritonitis is a symptom of some well-recognized lesion of the abdominal or pelvic viscera, and that the only rational treatment must be based upon this conception of the disease. Peritonitis is not a "disease distinct," as taught by Bichat, and upon which teaching the treatment of Alonzo

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Clark gained such great popularity. The "opium splint" is irrational, for it not only locks up the products of inflammation, but as shown by Wylie, Johnson, Baldy, and others, and by his own experience, subjects the patient to one of the greatest dangers of the disease, viz: obstruction of the bowels from adhesions.

In case of perforation of the bowel, opium is indicated to relieve pain and shock, and to prevent peristalsis and further escape of the intestinal contents into the peritoneal cavity. Again, morphine hypodermically may be used with benefit in some cases, when there is persistent and uncontrollable vomiting; but at the same time, calomel in small and frequently repeated doses, may be dropped on the tongue and the bowels induced to act. There are many cases in which it is absolutely necessary to give a hypodermic injection for pain, but this should never be given in such doses as recommended by the advocates of the opium treatment, and should not be administered at all unless the patient's condition is being made more grave by the shock provoked from pain.

The first two indications for treatment are best met by free purgation, as taught by Tait and others, and the majority of those who have adopted this plan select magnesium salts, as they produce very large watery stools. When the stomach rejects salts, calomel may be used.

He refers to a large number of cases treated by him in the most satisfactory manner by purgation, and among them several cases of threatened peritonitis, after laparotomies. During the past year he has not waited for symptoms of peritonitis after a laparotomy, but begins the use of small doses of salts, and if not retained, of small doses of calomel, a few hours after the patient gets from under the influence of the anæsthetic, and aids the purgative by the administration of enemata of milk and whiskey every third hour, which relieve thirst, and stimulate and nourish the patient, if retained.

In these cases he has had to give an occasional hypodermic of morphine, but this did not prevent the bowels acting. He has had to depend on calomel oftener than salts, as it was not rejected. He reports cases illustrating how purgative treatment aids in diagnosis, and others to show how all symptoms may be masked by opium, and an operation delayed too long, and concludes by stating that it is very important not to resort to the free use of morphine,

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unless an operation has already been decided on, and this administered to relieve pain and lessen shock.

After cases of abortion, or delivery at full term, in addition to large doses of ergot to produce rapid involution of the uterus, he has his patients, within twelve or sixteen hours, take a decided dose of salts to prevent peritonitis.

He reports a number of cases of perityphilitis, and advocates early operative interference. Since the cæcum and appendix are always completely invested with peritoneum, as demonstrated by Bull, the abscess of the appendix must be intra-peritoneal at the beginning, as has been shown by the experience of McBurney, Weir, Wylie, and others.

He agrees with Wylie, that should the symptoms of local peritonitis, in the region of the cæcum, not begin to improve by the fourth or fifth day from saline treatment and local applications over the seat of the inflammation, an incision should be made down through the muscles and the peritoneum dissected up, until a place is found where the abscess is attached, and then opened. While the operation would be easier if delayed, the danger of the abscess rupturing and producing acute septic peritonitis must be borne in mind, and hence the increased difficulty in doing the operation is more than compensated for in the risk saved the patient.

Cases are reported to show that a negative result with the hypodermic needle should never cause a moment's delay in operating. He operates just as promptly when he can find no pus.

He endorses the views of those who advocate the removal of appendix in frequently-repeated attacks of appendicitis, for the same reason that he would remove the tubes and ovaries for recurring attacks of pelvic peritonitis, when they are the cause of the inflammation.

In acute septic peritonitis, as met with in child-bed fever, or after perforation of the bowels, or from the emptying of the contents of an abscess into the cavity, or after operative procedures, or accidental traumatism, such as gun-shot wounds, stabs, etc., nothing short of a laparotomy can afford any chance of recovery, and this will not offer much prospect of recovery unless done very early.

He quotes the experiments of Pawlowsky, and recites his own experiments on animals to demonstrate how rapidly septic peritonitis may develop and produce death. He also reports a number of cases of gun-shot injuries and stabs of the intestine, in which he has seen violent attacks of peri-

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tonitis developed in a few hours, and in which the symptoms before operation did not indicate its development. Hence, when the abdominal cavity has been entered it should be opened and explored immediately. To wait for symptoms is to wait too long. Give morphine to relieve pain and shock, and operate even though the patient should feel perfectly well after the relief thus afforded.

In cases of perforation of the appendix, etc., the operation should be done at once, unless the patient is almost pulseless, as by so doing the shock will be relieved. The same rule will hold in cases of ruptured abscesses. In cases of perforation in typhoid fever, the condition of the patient before the accident must be taken into consideration, as pointed out by Mears; but, as this is a fatal accident, unless it can be remedied in operative measures, this procedure should not be condemned without having been tried in a larger number of cases.

After a review of the open plan of treatment, as suggested by Dr. B. E. Hadra—which he condemns—he recommends the following method, which should be adopted in all cases of *acute general suppurative peritonitis*, and which will allow of the complete exposure of the abdominal cavity, the removal of the cause of inflammation, and assist in restoring the functions of the intestines:

The abdomen is opened in the median line; the cause, if found, removed; the cavity thoroughly douched with hot water; all adhesions broken up, and, if tympanites is not marked, drainage tubes are introduced, through which the cavity may be washed out, as indications require. If the cause be found in the region of the cæcum the drainage tubes should be introduced through a second incision in the right illiac region.

In those cases in which tympanites is marked, causing pressure on all the abdominal organs, and thus creating much constitutional trouble, it will require special attention, and upon this point he lays great stress; for this condition is a dangerous one of itself. Not only does the weakened intestinal wall permit of the continued passage of septic germs into the peritoneal cavity and afford constant infection, but it must be remembered that the bowel cannot be replaced without great pressure and consequent traumatism, which will often kill in a few hours from shock thus induced. In advanced cases of peritonitis it must also be remembered that the walls of the intestines are rendered inactive by inflammation, and the power of contrac-

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tion cannot be restored until the inflammation is relieved; and hence, the bowel will continue tympanitic and the exchange of septic germs kept up, unless this condition is remedied. Dupaul punctured the intestine with a fine hollow needle in cases of tympanites with dangerous pressure symptoms, and this has been recommended by the leading writers up to this time. Even Senn refers to this as a procedure which may be resorted to. This has been tried by the author a number of times, and he was never able to see an appreciable decrease in the tympanities, and he argues that it is not reasonable to suppose that a paralyzed bowel could expel any quantity of gas through a needle. He has also practiced making incisions into the bowel, and by pressure attempted to expel the gas, but this does not prove satisfactory. He considers the best method of relieving a distended, paralyzed gut, full of poisonous gas, is to fill it with hot water, and this will not only free it of tympanites, but in getting rid of the gas and feces, etc., prevents infection.

Hence, in extreme cases, he believes an opening should be made in the lower part of the illeum, and the bowel thoroughly irrigated. An artificial anus should be formed and the bowel irrigated through a soft tube, as necessary to prevent tympanites and adhesions. Purgatives can have but little effect on a bowel, in fully developed septic peritonitis, when all the coats are inflamed; so we must reach it mechanically. With this plan the colon can be washed through a rectal tube, the small intestine irrigated as required through the artificial anus, and the peritoneal cavity drained and douched.

This method meets all the indications for treatment, and is the one which should be adopted in all cases where marked tympanites is present.

Papers were also read by Dr. J. B. Gaston, of Montgomery, on "Cerebro-Spinal Fever"; by Dr. S. M. Hogan, of Union Springs, on "Congenital Club-Foot and Its Early Treatment"; and by Dr. C. A. Robinson, of Huntsville, on "Antisepsis in Surgery"; but we regret not having synopses of them.

The Practical Relation of the Physician to Life Insurance

Was the subject of an exceedingly useful paper by Dr. E. H. Sholl, of Birmingham. Life insurance is now one of the accepted lines of business, and comes more or less frequently in the way of every physician. On his fidelity, conscientious ability, and pains-taking thoroughness, largely

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depends the stability of these great institutions. Careful elimination of unworthy risks, has been one of the great factors of the abiding success of life insurance. Some figures compiled from official reports are given, showing the amount of life business (and of colossal proportions) that is annually done in this country, which depends very much upon the requisite qualifications of the medical examiners of the companies interested.

It would be a matter of advantage to the companies and physician if the medical part of the blank application could be entirely separated from other portions of the application, given to the physician and by him forwarded direct to the home office, without supervision or review of the agent or knowledge of the applicant until the company reaches and forwards its final decision. It has been said such a doctor is "too rigid in his examinations." Now, this medical examiner is acting in a fiduciary capacity. He is to a certain extent, for the amount involved a, trustee for the company, and he stands in a certain sense, antagonistic to the party examined, to scrutinize with accuracy, according to his ability, the man, ready to turn in the full blaze of his best light, and search out all the dark corners, the hidden recesses of the man before him, to find, if in brain, lung, heart, stomach, liver, kidney, spleen, there is any want of harmony with the full measure of health.

He is to interrogate carefully the full bearing of heredity in all its details, to discuss the law of habit and its deviation from the true standard of right. He is to investigate carefully the details of occupation, of climate, of means, of possible sources of income. It becomes him carefully to examine the ear, eye, nose, throat, the condition of the skin, the appearance of the tongue, and all these elements must enter into the final summation of the conscientious physician of a first-class risk, even though these requirements may not be found in the ordinary application, for they are all factors in the perfect solution of the problem.

Occasionally an irresponsible party is turned loose on the community as a company's agent, having an eye single to his own good. When a conjunction of such material with an unqualified or unworthy physician is made, it requires no prophet to tell the result. Sometimes such a character as this, coming in contact with men of ability and integrity, pursue another course, as indicated in a letter to me as a leaf from the personal experience of one of my medical friends who writes me thus: "I find from personal expe-

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rience that these functionaries place greater stress upon the money value of their services than upon their obligation to those they serve. They bring an applicant for examination, and you conscientiously state or affirm, as required of you, that, in your opinion, the party is not a safe risk; therefore you refuse to recommend him. This opinion goes directly to the parent office, and the applicant is at once refused solely upon your affidavit. You get your fee, but the selfish agent gets nothing for his weeks of pleading and expenditure of money. Hence, he is soured, and commences to spank the seat out of your official trousers, by ceasing to patronize you, gets revengeful and seeks at once more plastic material for his work of self aggrandizement, such as will pass anyone, well or rotten."

Here we have a dark picture, but dark alike on both sides, for the man who would thus defraud his company can only do it by one or two means, an unscrupulous doctor or an incompetent one. Until humanity is made of entirely different material, such departures of rectitude will appear in every legitimate line of business.

Thorburn says, "The responsibility of medical examiners is controlled by the principles of common law in all countries." In Michigan, any medical examiner, referee, or person seeking insurance who knowingly makes any false statement to the company as to bodily health or condition of person applying for insurance, which would affect the property of prudence of granting such insurance, shall be guilty of a misdemeanor and shall be liable to a fine of one thousand dollars, to imprisonment in county jail for three months and liable in action to the company for the full amount of insurance." A stringent but wise law.

So many are the composite elements that enter into the harmony of a thorough and complete work that the task imposed upou the careful physician is often a burdensome one—that, with a desire to do justice to all concerned, is certainly not to be slightly performed. The environments of different localities that trend toward certain diseases of grave nature, the averages of death-rate are all to be considered in the inspection of the individual, even although there may be at the time no departure from health just so far as his age, heredity and occupation may effect him.

While with the passing years we have the light of a golden civilization, with all its surroundings to increase the general expectation of life, we have certain conditions in the rush of "the maddening crowd," with its desires for

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and opportunities for wealth, that early impair the forces of life, shatter nervous system, overtax and weaken the heart, set up interstial changes in the kidney, and pave the road to an untimely grave. These facts and considerations should enter into the study of our separate cases and guide us to safe and wise conclusions.

Of latter years more accurate study has been given to the functions of the kidney and the pathological changes in its structure, so far as relates to their bearing upon life and its expectation. In the United States Life Insurance company, 11 per cent. of their mortality for three years occurred from Bright's disease; hence we have here an important study to ascertain how far the presence of albumen in the urine should go towards vitiating an application. Many who have written hold diverse views as to the grade of its bearing upon the condition of the general health—some arguing that, when intermittent, occurring at definite periods, or at certain hours of the day, it is physiological and functional, and does not militate against the risk—albumen having been known to be present in the urine for twenty years without unfavorably affecting the health. If, however, the quantity of albumen is large, if we have hypertrophy of the left ventricle or tube casts, or a gouty dyscrasia, if the applicant is 40 or more years of age—if retinal changes are present, the applicant must of course be rejected, as sooner or later these symptoms, though modified and alleviated for a time, will return and lead to a fatal issue. Strange exceptions occur. A gentleman, some fifteen years ago, presented all the graver symptoms of albuminuria, with an aggravated series of dropsical symptoms of gradual invasion with almost entire suppression finally of urine, profound uræmic coma, and yet came through it all up to a gradual, and up to this time, an apparently perfect recovery, leading now an active life of hard labor and busy toil.

Since 1865, Dr. Sholl has met but one case where chronic suppuration of the middle ear was a cause for rejection. Apparently perfect health obtained until the period of his death by yellow fever in Pensacola several years later. Here the discharge was not continuous, but had showed itself at intervals for a number of years before, as the possible outcome of disease of childhood. In strumous habits this follows scarlatina for an indefinite period, becoming an ultimate cause of death.

Baker, of Cleveland, O., advises the unconditional rejec-

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tion of cases where the canal is narrowed from any cause; where there are polypli in the tympanic cavity or granulations, where there are desquamative processes in the middle ear or external meatus; where there are caries or necrosis of the temporal bone; where there is paralysis of the temporal bone; where there is paralysis of the facial nerve; where there are fistulæ of the mastoid cells; where there is abundant bloody or offensive discharge of long duration, and those with pains behind, in front of or above the ear, and where we have giddiness, unsteadiness of gait, and other evidences of cerebral trouble. Reference to such accurate detail as this, which is based upon fifty post mortems, will always be a safe guide. Dr. Baker deserves great credit for his careful elaboration.

Careful study of the heart presents itself as a necessity. The distinction between mere functional and temporary disorders, and the graver lesions are to be differentiated, and the comparative class of risk to be determined, for even in certain organic troubles there is a reasonable expectation of life. These cases might be insured at higher rates. Stenosis of the aorta with its ultimate dropsical accompaniment with mitral trouble, though regarded as the least grave of valvular trouble, sooner or later ends fatally. Aortic regurgitation with its accompanying dyspnœa, angina pectoris, and the irregular pulse which we have all noticed, proves fatal suddenly as a general rule. A diffused mitral murmur is always significant of danger. Thompson says: "Functional murmurs are always systolic in time, and found close to the left of the sternum, between the second and third ribs, 1½ inches to the left of the sternum between the second and third ribs and over the aorta." This class of cases, though comparatively infrequent in the experience of most of us, requires most careful and thorough examination.

With the graver pulmonary lesions we are most familiar, and they are the more readily detected. Chest measurement, inspection expansion, percussion, auscultation, family history will soon solve any difficulties that present themselves of a graver character. In addition to the apicial and other symptoms, pulse, temperature, appearance, comparative weight, heredity should all form part of the estimate, and especial regard should be had as to the prolonged expiration at the apex, as indicating the earliest possible stage of the degenerative process in the lung.

The excessive use of tobacco often is a potent factor for

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evil in instituting various degenerative processes through mal-assimilation and derangement of nutrition, causing distressing dyspeptic symptoms and the following train of evils:—weak heart, with irregular action, anæmia, alarming dyspnœa, hemorrhoidal troubles, and pulmonary difficulties. The man who uses tobacco freely before breakfast, is to a certain extent like the man who drinks before breakfast, he has his finger board marked for the other country.

In the matter of the use of the liquors of the various kinds, we are to sift details closely and judge accordingly, for we are somtimes greeted with the answer: "Yes, I drink, but not much." Here the possibility comes in as with the man who could never understand why he got drunk, as he never took but one mouthful, till he measured his mouth one day and found that it chambered an even pint. No false modesty should keep us from probing these cases to the bottom.

Likewise in all who give any past syphilitic history, the examination should be scrutinizing and thorough. He has seen the baneful and fatal effects of this disease in twenty to thirty years after the original attack, more particularly in the grave cerebral lesions that have led to death.

Thus a brief general review points out the more important features of our medical duty and our especial practical relation to this great subject. It need not be pursued to minute details, for they are the outgrowth of the general lines of investigation.

Dr. J. G. Thomas, of Mobile, read a paper giving

Some Observations Made During a Visit Abroad.

After mentioning the University of Edinburgh, and objects of interest in Liverpool, etc., he says that in Paris he fell into the hands of his old friend, Dr. Edward Warren-Bey, who was Surgeon General of North Carolina during our civil war. Afterwards, he was Surgeon General of the Egyptian Army; but, for the past fifteen years, he has resided in Paris, where he justly stands high in his profession and does a large and lucrative practice. Dr. Thomas also met with Ricord—just two months before his death. Dr. Brown Sequard was enthusiastic as to the proper uses of the so-called *Elixir of Life.* He says that evidence is found in ancient Chaldaic, Hebraic, and Oriental literature that relative products were used even before the days of Moses. In ancient Rome, the testicle fluid, as derived from the goat and wolf, were regarded as life-giving and strengthening,

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enabling those partaking thereof to sustain prolonged fatigue. The Cheyenne Indians—the bravest of the Rocky Mountain tribes—drink the juice of the testicles of buffaloes and antelopes—maintaining that it gives bravery and sexual vigor. At la Salpetriere, Charcot is meeting with wonderful success with hypnotism and electricity. Suspension for locomotor ataxia is practised with success. Pasteur's practices with reference to inoculation for hydrophobia are described, and several things said to impress the impressible that the inoculations are curative of hydrophobia. Still he has a death under treatment every now and then. Dr. Thomas seems to be a convert to the doctrines of Pasteur, because of his actual observations. He saw Apostoli using his electrical treatment for uterine fibroids, endometritis, chronic metritis, ovaralgia, menorrhægia, etc. He promptly relieves bleeding uterine fibroids by using, for about five minutes, intra-uterine, the positive pole, which is anti-congestive and hæmastatic, while the negative pole was on the abdomen. He used Gaiffe's cabinet battery of 36 cells; but a portable battery of 24 cells answers all practicable purposes, and is the kind Dr. Thomas uses. He believes Apostoli has rung the death-knell of indiscriminate laparotomy, and has hoisted the flag of conservative gynæcology. Spencer Wells, Playfair, both of the Keiths, and others, are now adopting the Apostoli method. Dr. Thomas then spoke of visits to other hospitals, etc., where he saw the application of Tarnier's forceps, the use of the incubator for raising prematurely born children, etc. In Fournier's skin-disease wards, he saw a case of leprosy. In London and Dublin hospitals, he witnessed some magnificent surgery by young men. Alimentation and hygienic measures are the chief agents used in Brompton Hospital for consumptives. Massage and electricity are the chief agents employed in the West End Hospital—principally for nervous diseases.

Therapeutics of the Endometrium.

Dr. I. L. Watkins, of Montgomery, after briefly describing the endometrium anatomically, proceeded to enumerate the various growths that are found—chronic hyperplasia, lympho-sarcomatous growths, mixomatous, sarcomatous, adenomatous, papillomatous, and carcinomatous growths. He next discussed the subjects of acute and chronic endometritis with their causes. He then discussed the question of the propriety or impropriety of intra-uterine medication, giving the various opinions, pro and con.

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Then proceeding with the treatment he mentioned some of the numerous remedies in popular use, favoring the employment of the more vigorous measures from the beginning, which he said he used with the assistance of a previous application of a four per cent. solution of cocaine. He emphasized the necessity of dilating the cervix and clearing the mucous membrane of the secretions before making any applications. Spoke of the value of the cervical speculum to prevent the remedies from being rubbed off before they reached the diseased spot. He then briefly discussed the comparative value of the various application. He dwelt, at some length, upon the treatment by *drainage*, as advocated by Drs. Frisch and Polk, of New York, describing the method and its applications. He spoke of the *curette*, the indications for, and manner of its use.

He closed with somewhat extended remarks upon the "Apostoli Treatment" by electricity. Said that the introduction of this remedy marked the beginning of a new era in the treatment of uterine diseases; but that, as yet, the necessary pharaphernalia to put into use this valuable remedy, is very much in the way of its *general* use; that the batteries were necessarily large, too large to carry from house to house, making it necessary to treat patients in the office, and accidents sometimes occurred from allowing patients to go directly home after being subject to strong currents, while failures have resulted from imperfect application of weak currents. He was much pleased with the remedy after a considerable experience in its use, extending over a period of about twelve months. Said that endometritis-hemorrhagica was more quickly relieved by this remedy than any other; for this purpose, it is necessary that the electrode, charged with from thirty to fifty miliamperes, come in contact with *every* vegetation at *each* sitting. He spoke of the tonic effect of electricity upon the muscular fibre of the uterus; also its effects as a preventive of the various pathological conditions dependent upon sub-involution; also the removal of various neoplasms. He said that sub-peritoneal fibroids and fibro-cystic tumors of the uterus were the least amenable to this treatment, as it is difficult to pass the current through them. He was not pleased with his results from its application to epithelioma of the cervix.

Dr. James A. Wilkinson, of Flomaton, Ala., read a paper on

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A Few Thoughts on Modern Therapeutics.

A few of the recent therapeutic agents are reviewed, and an estimate placed upon them, based on careful physiological observations of therapeutists of high repute, both in Europe and the United States, and also from the experience of the writer, in their use. The conclusions expressed in the paper are, that *thallin*, *antipyrin*, and *acetanilide*, of the aromatic series, are closely allied, therapeutically, are *not* curative in fevers, but merely palliative—that their distinctive feature is *analgesic*. While they are of undoubted value in the hyperpyrexia—as of thermic fever—when watchfully administered, they, through the arrest of the functions of the excretory organs, and because of their derangement of digestion and tendency to cause collapse, render continued fevers more protracted, and a higher death-rate follows their free use. Also, their proprietary character is highly objectionable. A preference for acetanilide is expressed.

A favorable opinion is given of *strophanthus* and *nitroglycerine* as heart-tonics, and also of the latter as a speedy and reliable diffusible stimulant. Beneficial effects are reported from the use of *guaiacol* in chronic bronchitis and the cough attending catarrhal fever.

Most serviceable of the recent *hypnotics* are *paraldehyde* and *urethan*, but their use is restricted to those cases in which pain is not a prominent symptom.

Attention is called to the fact that the late Prof. Cabell, of the University of Virginia, in his lectures, taught that the *first* toxi ceffect of chloroform is manifested in the respiration. In view of the great number of new remedies now offered to the profession, and the many that we may reasonably expect through the labors of the chemists, the suggestion is made that all shall be referred to a central committee, to carefully study their physiological action and clinical results, before their free use in practice shall be deemed safe.

During the Night Session, Dr. Jerome Cochran, of Montgomery, President of the State Board of Health, gave a lengthy, advisory and instructive Address on the best methods of administering the health laws of Alabama, and the law to regulate the practice of medicine in that State.

THIRD DAY.—After routine business, Dr. T. W. Ayers, of Jacksonville read a paper on the "*Therapeutic Value of Phenacetine.*" It was a good paper.

Dr. W. H. Hudson, of Lafayette, read an able paper on

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"*Tuberculosis as an Infectious Bacillary Disease, and Its Relation to Hygiene.*" Much of the paper was the record of original investigations at home, and of some experiments at the Johns Hopkins University. The paper was worthy of a prize, and we hope to see it widely published and studied.

Psychical Research and Practical Medicine.

Dr. John E Purdon, of Cullman, Ala., read a paper which showed an intimate personal acquaintance with the subject of his essay. Recognizing the fact that it is to the arbitrament of practical medicine that all psychological devices, such as mesmerism, hypnotism, faith-cure, healing by the method of suggestion, etc., must ultimately submit themselves for endorsement as safe and legitimate, Dr. Purdon laid before his hearers a succinct account of the development of the curative hypnosis from the time of Mesmer to the present day, and demanded of the profession a full hearing and a fair judgment upon what is at present, more or less, an open question to scientific minds—namely, the employment of the nervous system of the sufferer as a therapeutic agent in his own cure, through the production of physical changes in the same.

The opinions of the two leading French schools were briefly alluded to, and the views of Professors Charcot and Bernheim contrasted as the pathological and physiological mode of regarding hypnotism; the former considering the hypnotic sleep as the curative agency, while the latter placed all effects to the credit of suggestion, itself the prime promoter, in the first instance, of the hypnotic state.

A list of diseases, treated by representative physicians, was given, which tends to show that hypnotism is no toy, but an engine of tremendous power and danger, if applied imprudently or by unworthy hands. As a secret instrument for the commission of crime, the possibility of its use was strongly insisted on.

Dr. Purdon offered as his definition of the hypnotic state the following expression: "That it represents an altered state of the psychic organism, brought about by artificial means, and that modifications of functions so induced may range from those manifested in consciousness to those expressing change in the ultimate units of the body; the term *psychic organism* being used to serve for the subjective side of the nervous system viewed as a whole."

The cases brought forward by Dr. Purdon, as having occurred in his own practice, while in charge of a convales-

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cent military hospital in the south of England, were such as on *a priori* grounds one would expect to be benefited by a strongly developed subjective impression; but the details of the specially chosen cases were such as to support him in his deductions, that a bond existed in certain instances between the operator and his subject, constituting, for the time being, a compound organism of the twain; this bond, objectively regarded, being an unknown physical medium, while subjectively it finds its realization in that community of sense, intelligence, emotion, and volition, which the progress of modern psychical research tends to establish as a possibility from an ever-widening induction.

Dr. H. M. Hunter, of Union Springs, read a paper on "*Placenta Prævia.*"

Dr. J. R. Jordan, of Montgomery, read a paper entitled "*Some Remarks on Rheumatism in Infant Life.*"

Report of the Continued Fevers in Alabama.

Dr. John P. Furniss, of Selma, Ala., based this report on replies to 300 circular letters issued to the presidents, health officers, and other members of every Medical Society in the State. The letters contained the following interrogatories:

1st. To what extent have these fevers prevailed in your section, and what has been the type of them?

Answer. The prevalence of these fevers lately has not been so great as formerly. The period of greatest prevalence was 1881, 1882, 1883, and 1884. The largest number of cases occurred during the months of May and October.

2d. If more than one type, how do you class them?

Answer. They are variously classified as typho-malarial, continued malarial, simple continued, with typhoid complications, enteric, typhoid, and a fever that is neither malarial nor typhoid. The majority call it typhoid, and it is a notable fact that those who entertain this opinion are the residents of towns and cities, and are among the senior members of the profession.

3d. What is the clinical history of typical cases?

Answer. After reading the clinical history of typical cases, one can but be impressed with the fact that, by whatever name the different reporters call them—or rather it—they all describe a disease which has the same symptoms, the same duration, and are influenced by the same therapeutics. The statement that "there is nothing in a name" is a great fallacy. The majority of intelligent patients are sufficiently educated to know that in certain well-recognized

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diseases special dangers are to be avoided and particular precautions are to be observed. When the patient and his friends know the character of his complaint, he and they can co-operate and assist the physician in a variety of ways.

4th. Have autopsies been made in any of your cases, or those within your knowledge; if so, what lesions have been observed?

Answer. Only three replies state that autopsies have been made, and in each instance the characteristic lesions of typhoid fever have been observed. Other reporters, who have observed the same fever in the hospitals of New York, in other States, and in other countries, state their belief that our continued fevers are typhoid.

5th. In your opinion, how do these fevers originate and how are they propagated?

Answer. A variety of opinions are entertained as to their origin. Some hold that they are of malarial origin, some that they are caused by decaying animal and vegetable matter, and some by germs peculiar to the disease, while others believe that they originate *de novo* and in disregard to all known sanitary laws. The majority believe that they are propagated by the cause which produces them.

6th. Have you met with cases of intestinal hæmorrhage? If so, what percentage of cases, at what period of the disease did it occur, and what was the result?

Answer. Intestinal hæmorrhage has been met with once in fourteen cases, occurring in the first week, and, when slight, it seemed to exercise a beneficial effect on the disease. The majority of cases occurred at the end of the second or during the third week. It was fatal in 66 per cent. of cases. Even those who class these fevers malarial take precaution to prevent hæmorrhage.

7th. Do you consider these fevers contagious?

Answer. Some reporters state that typho malarial and continued malarial fevers are never contagious. Others think they are, through infected clothing, contaminated drinking-water, and dejecta. Those who think they are communicated by continued exposure, adduce instances where other members of the family and the nurses take it, when physicians and visitors do not as a rule.

8th. What treatment has been most successful?

Answer. All reporters have observed the inutility of quinine to abridge the duration of any of the continued fevers, no matter by what name they are called, and all avoid purgatives after the first week. The treatment adopted by the

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large majority have been practically expectant, with what is claimed as a judicious use of antipyretics, especially antipyrine and antifebrine. Not a single reporter mentions having tried the treatment of Brand, which has been so enthusiastically recommended and lauded by Dr. Simon Baruch, of New York, and favorably spoken of by Dr. Loomis. Brand's success is marvellous, and he claims to have lost only one out of 342 cases.

All replies show that strict attention is paid to diet, and that the mortality has been light, except at Thomasville, in Clark county, where eleven out of thirteen cases died last year. Dr. Furniss has adopted the rule of not allowing solid food for ten days after the temperature had reached the normal point, whenever there *had* been any enteric symptoms.

Treatment of Organic Stricture of the Urethra

Was the subject of a paper by Dr. E. W. Morris, of Birmingham. He said electrolysis was especially useful in very small, resillient strictures, and is preferable to rapid dilatation. Gradual dilatation is best in all strictures of recent development; indeed incipient strictures may be cured by this plan alone, or when used with applications of nitrate of silver and massage. If these fail, then use dilating urethrotomy, with antiseptic precautions—making the incision along the roof of the urethra. Do not pass the sound in the deep urethra during the first week after operation. The operation is thus without danger. Of his twenty-six urethrotomies, no bad complication occurred except in one case, where curvature of the penis, during erection, resulted, which was not relieved for some months.

Dr. B. L. Wyman, of Birmingham, read a paper on "*Treatment of Hæmorrhoids, with Special Reference to Operative Procedures*," reviewing the subject at length, and describing methods of operating, etc.

Dr. J. R. Darwin, of Huntsville, read a paper on the "*Early Diagnosis of Carcinoma Uteri, as Relating to Curative Treatment.*"

Dr. J. F. Walker, of Florence, was to have read a paper on "*Does the Use of Tobacco Cause Serious Digestive Disorders*"?

Corneal Ulcers, and Their Treatment

Was the title of a paper by Dr. S. L. Ledbetter, who classified corneal ulcers as phlyctennlar, superficial, deep, or serpiginous. As to treatment, he advised, in *phlyctenular ulcers*

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hot fomentations, belladonna, and the actual or thermo-cautery, when there is marked irritability of the eye, with decided photophobia and ciliary irritation; at a later stage, when stimulation is required, use calomel locally, or mercurial ointment. Treat *superficial ulcers* similarly; but if sepsis threatens, use antiseptic washes freely, the actual cautery, galvano-cautery, scraping, etc. In *deep ulcers*, perform paracentesis corneæ to relieve tension and nervous irritability of the cornea, to prevent staphyloma and iritic adhesions, to evacuate pus, etc.; where stimulation is distinctly required, perform Saemisch's operation. In *serpiginous ulcers*, use the cautery and germicides, puncture the cornea when necessary, and wash out the anterior chamber antiseptically to destroy points of infection which may exist in Descemet's membrane.

A paper on "*Multiple Neuritis*," by Dr. Edwin L. Marechal, of Mobile, was read; also one by Dr. Nathan Bozeman, of New York, on "*Ovariotomy*," and also one on "*Tuberculosis*," by Dr. John D. Stewart of Attalia.

During the afternoon a visit was made to Pratt Mines, and at night a banquet by the local profession, etc., was enjoyed until a late hour.

FOURTH DAY.—Dr. Jerome Cochran presented the report of the Board of Censors, containing a resolution to instruct legislators to restore the law prior to 1886 to regulate the practice of medicine in Alabama.

The case of Dr. S. W. Brooks *vs.* The State, which was an appeal to the Supreme Court, where it was reversed by Judge Somerville, was taken up and discussed. Section No. 4078 of the Code of 1883 imposed a fine of $100 on persons guilty of the practice of medicine or drugs without license. It was on this charge that Dr. Brooks was convicted, and when he appealed the decision was reversed. The Association appealed to the Legislature to make an amendment to Section No. 4078 of the Code, to enable the courts to enforce the law against those who violate the law to regulate the practice of medicine, as it stands in the Code of 1876.

The committee appointed to consider *contract practice* and report at this session of the Association, have carefully considered the many difficulties involved, and beg to respectfully submit the following as a substitute for section 3 3 of the Ethical Ordinance of the Association, page 222 of the Book of Rules, as a solution of the problem, and respectfully request its adoption:

Be it ordained by the Medical Association of the State of

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Alabama, That physicians may practice for a stated salary for any railroad corporation so far as railroad accidents and injuries are concerned; for any mining or manufacturing establishment, but not to include the salaried officials and managers of such establishments; for State, city, or municipal educational and charitable institutions, and on plantations cultivated by tenants or hired laborers; and that all underbidding and soliciting under this system of practice shall be regarded as unprofessional and unethical, in the same way and to the same extent as in ordinary private practice.—Peter Bryce, M. C. Baldridge, Charles Whelan, John C. LeGrand, Committee.

The case of Dr. W. C. Cross, of Blocton, was then discussed. The Board of Censors had refused to accept Dr. Cross' resignation when tendered, that he might engage in contract practice, and had dropped his name from the roll. This action was rescinded and the resignation accepted.

The following officers for the ensuing year were elected: *President*, Dr. W. H. Sanders, of Mobile; *Vice-Presidents*, Dr. Shirly Bragg, of Lowndesboro', Dr. W. Camp Wheeler, of Huntsville; *Censors*, Dr. G. A. Ketchum, of Mobile, and Dr. J. J. Dement, of Huntsville; to fill unexpired term (one year) of Dr. Sanders, on account of his being elected to the presidency, Dr. Peter Bryce, Tuscaloosa; *Orator*, Dr. E. P. Riggs, of Birmingham; *Alternate Orator*, Dr. Wyman.

Nine Counsellors were then elected. Huntsville was selected as the place for the annual session during April, 1891. New officers were installed. Adjourned *sine die*.

GEORGIA MEDICAL ASSOCIATION.

The forty-first annual session convened in Brunswick, April 16th. The retiring President, Dr. J. S. Todd, of Atlanta, called the meeting to order, and introduced the Vice-President, Dr. R. O. Engram, of Montezuma, who presided in the absence of the President elect, Dr. J. B. S. Holmes, of Rome.

In the absence of the President, Dr. Engram read a paper on "*Food in Health and Disease.*"

The afternoon was spent in an excursion.

SECOND DAY.—Dr. Virgil O. Hardon, of Atlanta, read a report of "*Two Cases of Rare Ovarian Tumors.*" One was a case of sarcoma of the ovary, which was removed, and the

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patient recovered. The other case was one of superficial papilloma of both ovaries. The double ovariotomy resulted in recovery of the patient. If the diagnosis is correct, according to Olshausen, there have been previously but six recorded cases.

Dr. Samuel C. Benedict, of Athens, read a paper on "*Aseptic Versus Antiseptic Surgery.*" He is a strong advocate of both, but classed under the head of aseptic surgery all cases treated without medicaments or germicides, and under the head of antiseptic surgery such as were treated with these agents.

Dr. J. A. Dunwoody, of Brunswick, expressed concurrence in the opinions expressed.

Dr. W. F. Westmoreland, Jr. of Atlanta, said that asepsis and antisepsis are really principles of surgery. Antiseptic surgery could be practiced successfully where you could not rely on asepsis, viz: in hospitals and hovels. His arguments in favor of antiseptic surgery were, less cost, less time, completer union, less pain after operation.

Dr. J. F. Lancaster, of Flovilla, endorsed the views of Dr. Benedict; thought to get the most perfect results we should practice both asepsis and antisepsis.

Dr. J. McF. Gaston, of Atlanta, thought the views presented very appropriate, but the paper should have extended to septic surgery. The most important phase of treatment of wounds is the prevention of trouble from the undue use of applications which may aggravate the existing condition, and a caution is needed against septic germicides. The crying evil connected with the surgery of to-day is the result of measures which are classed as antiseptics, in such a way as to contaminate the structures, and lead to serious constitutional troubles. He thought all operations on normal tissues and conditions not involving microbes might be conducted upon the principle of asepsis. He would avoid the use of corrosive sublimate in abdominal surgery, chloride of sodium answering all the conditions, and attended with no risk. He would also avoid bringing a solution of corrosive sublimate in contact with freshly-cut absorbent surface. Where sepsis already exists, it should be corrected by germicides, but with due regard to the safety of the patient.

Dr. Eugene Foster, of Augusta thought cleanliness the most fruitful source of success in surgery. He didn't have the faith in antiseptics expressed by some of its advocates. Tait, one of the greatest living surgeons, does not use antiseptics.

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Dr. J. S. Todd, of Atlanta, referred to the antiseptic properties of turpentine; said it was a fine germicide, and urged its use in typhoid fever upon that principle.

One Hundred and Seventy Consecutive Cases of Railroad Surgery.

Dr. H. McHatton, of Macon, Ga., did not intend to show how this branch of work should be done, but how it can best be done with our present opportunities. The eventual solution here and elsewhere will be the establishment of hospitals, the expense to be borne by the employer. At present on most of our roads there is no medical department, and in the majority of instances the nearest doctor is called in the emergency. No matter how competent he may be, he is not prepared to treat the case properly and immediately, as he has no reason to keep the necessary appliances on hand. Consequently valuable time is lost, and inefficient treatment often the result. If he is in a city his work is scattered over miles of territory, in boarding-houses and cabins, each case requiring a nurse—the consequent expense to the company being enormous. By making a regular medical department, railroad corporations are enabled to secure at a moment's notice the services of men familiar with this class of work, which presents more peculiarities than one not in the habit of doing it would think.

The following table of 170 consecutive cases, with 338 clinical lesions treated by Dr. Williams and Dr. McHatton, gives a fair idea of the type of work required of railroad surgeons. Cases proving immediately fatal are excluded from this table. Total number of cases, 170. Of these, there were contusions of back, 12; of back, followed by hæmaturia, 2; of shoulder, 12; of wrist, 1; of leg, 5; of chest, 5; of arm, 6; of hip, 11; of face, 3; of hand, 3; of foot, 4; ulcers following old contusions, 3; crushed fingers, 90; crushed legs, 3; crushed thumbs, 11; crushed toes, 11; crushed arms, 5; crushed foot, 1; crushed hands, 12; lacerated wounds of face, 10; of stump of leg, 1; of foot, 1; of arm, 3; of scalp, 8; of leg, 1; of lung, 1; sprain of ankle, 14; burn of face, 1; of hand, 1; of leg, 1; of foot, 1; fracture of os innominatum, 3; of humerus, 5; of radius, 6; of ulna, 5; of acromium process, 1; of metacarpus, 4; of malar bone, 1; base of skull, 1; ribs, 3; of tibia, 3; of clavicle, 3; of fibula, 4; femur, 3; penetrating wound of elbow joint, 1; of foot, 1; gunshot wound of neck, 1; of thigh, 1; dislocation of the radius, 1; of humerus, 1; of astragalus,

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1; amputations required of leg, 1; of fingers, 28; of forearm, 3; of arm, 5; of middle of foot, 1; of toe, 1; of thumb, 5.

The table is headed by 64 contusions of various parts of the body, all of clinical importance. If a man gets his shoulder caught between bumpers, and gets an injury that does not cause a fracture or break of the skin, but is followed by serious œdema and ecchymosis, with consequent loss of the use of the limb for weeks, it is still a contusion. One of the above cases was in a stooping position, when a six-inch beam fell, striking him between the shoulders with sufficient violence to make a comminuted fracture of the tibia and fibula, and leaving a contusion extending from the seventh cervical vertebra to the coccyx. Dr. McHatton's treatment of these cases is the wet pack until inflammatory action subsides; then friction, with a mild liniment, and electricity if there is any indication for it.

The next three cases of ulcers dependent on sloughing following contusions were so when they came under care, and were treated with the ordinary routine of pressure, grafting, and iodoform.

Of 133 cases under the head of crushed, 90 are fingers, not including any fingers under the head of fractures. Consequently these injuries cover everything from a laceration of the soft parts from pressure to a complete destruction of the member. He makes it a cardinal rule never to sacrifice the smallest part of a member that there is a possibility of saving.

The finger will serve as a good type of the treatment adopted for these cases of crushed members. First, we clean the member perfectly with an antiseptic solution of bichloride. He is in the habit of doing this with the stream from a fountain syringe; then, if there is any part that is absolutely destroyed, cut it off. Put all parts in as near a normal position as possible, and be as free as the case requires with antiseptic sutures; dry thoroughly and dust freely with iodoform. This may not be an antiseptic, but it certainly retards pus formation. Then bandage carefully with antiseptic gauze, making a moderate amount of pressure to retain the parts in position. Follow this up with a light splint if needed, and cover all with a thick layer of absorbent cotton, followed by a common bandage. Instruct the patient to wet it with a carbolized solution if tt becomes painful. Don't remove dressing until pain, constitutional symptoms, or the saturation of the dressing ren-

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der it advisable. If the injury is followed by sloughing, a thick poultice for a few hours will often be of material aid; and the iodoform is the best dressing for the subsequent granulations. Oxide of zinc ointment is also useful where there is need of slight stimulation.

As to the 25 lacerated wounds, where he has no chance of primary union, his treatment is the same as with the finger; but in all small wounds, where he has a chance of primary union, he dispenses with the outer dressings, and paints the part over with iodoform and collodion, incorporating gauze or cotton with it when extra strength is needed.

In scalp wounds we use as many sutures as we need with absolutely no fear of the result.

Sprains of the ankle are common. My rule is moderate pressure and cold applications, as in contusions, followed by plaster of Paris, Martin's bandage, or the silk stocking, according to the severity of the injury.

Burns we still treat primarily with Carron oil or carbolized vaseline, under absorbent lint and a thick layer of cotton, followed by grafting, if the surface is large, as soon as we get the proper granulations.

The three fractures of the os innominata, with two more had in private practice, have been treated by position and sand-bags. Those of the humerus were treated by right-angle splint; those of the radius and ulna by anterior and posterior splints, usually followed by plaster of Paris; those of the clavicle by Sayre's method; those of the tibia and fibula by sand-bags, followed by plaster of Paris; of the femur by Buck's extension, followed by plaster; of the ribs by the adhesive plaster bandage.

In selected cases plaster of Paris can be put on with safety, but ordinarily it cannot. Most fractures are followed by œdema, which lasts a few days. If the plaster is put on before the œdema takes place, it cannot be left on with impunity. If during the œdema, as that subsides the plaster becomes too loose and does not fully cover the indications. Of course if the patient is in reach you can take the chances, but if he is at a distance be careful. As an immediate dressing for a fracture of the leg or forearm, to move a patient with comfort a pillow makes an excellent splint.

The fracture at the base of the skull was interesting. Bob B., standing on the top of a car, was struck on the back of the head by a bridge. Two hours afterwards there were large hæmatoma at base of skull on left side; pulse

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70; deep hebitude, almost amounting to coma; pupils normal; ice-bag to head and dose of calomel. Second day, paralysis of right arm; pulse 50. Third day, paralysis of right arm; pulse 54; slight mental improvement; recognizes mother; no knowledge of events up to five years ago. Repeat calomel. Fourth day, calomel acted well; sugar in urine; no recollection of immediate past. Twelfth day, very gradual improvement; slight motion of each hand; still no reccollection of immediate past; can't sit up, as both glutei are very tender to pressure; pulse 60; no sugar in urine. Twenty-first day, all movements, except extension of right arm; remembers events up to day previous to accident; complete recovery in every respect in about thirty days.

In this case the condition of the intellectual faculties was of extreme interest. There was a large amount of sugar in the urine. At first there was a question of meningeal hæmorrhage from contre coup, involving motor area of the left arm, but the supervention of paralysis of the other arm was incompatible with that diagnosis. The sugar in the urine was a valuable diagnostic point. Paralysis of both arms may have existed sooner than it was discovered, as at first there was no aid from mental power.

The compound and comminuted fractures were all treated on the above general principles as to splints, with the addition of fenestra when needed, for cleanliness and observation.

The time for amputation is still mooted, but he operates as soon as reaction takes place, and all of these amputations, with the exception of a few of the minor ones, were done at that time. Shock in this class of injuries is, as a rule, more severe than would be expected, which is supposed to be partially due to the mental condition brought on by the surroundings at the time of the injury. If the patient is in a state of shock, the first thing to do is to put him in as comfortable condition as the surroundings will permit. Use external heat, and be free with hypodermics of morphia and whiskey. He rallies; then comes the question of when to operate and what operation to do. The railroad surgeon can recognize no regular operation, and cannot be governed by points of election. He is compelled to make the best of what he has, and save as much of the limb as possible. Having decided on the operation, cleanse the part thoroughly, shave off surrounding hair, and get everything as nearly antiseptic as possible. Use soap and

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water on the surrounding parts, followed by ether and a free use of bichloride solution. The operation being done, first comes the question of ligatures—what shall we use, and how? Early teachings are lasting, and it was always his habit to use the long silk ligature. Now he looks upon well-prepared catgut or silk cut off short as equally good. Last year, in his report on surgery before this body, he advocated the early removal of drainage tubes—from 24 to 36 hours. The more he uses this method, the more convinced he becomes of its value. He usually uses silk sutures, one row of deep coaptation sutures, and sufficient superficial ones to insure perfect coaptation of the skin. He absolutely condemns the use of plaster. It is not antiseptic. He has seen flaps slough from its pressure, and then its removal. As to the final dressing, dust all the parts freely with iodoform, and cover with many layers of antiseptic gauze, followed by a thick coating of absorbent cotton, on top of which goes a firmly-applied cotton bandage. Impervious rubber dressings have not proved beneficial in his hands. By retaining the excretions of the skin and keeping a constant warm moisture they act as a poultice. With the exception of removal on account of the drainage tube, this dressing stays on until the parts are healed, provided saturation or constitutional symptoms do not prevent.

Among cases of unusual interest, he confines his report to this one: J. C.; two hours after accident; profound shock; pulse 140; fracture of os innominata; injury to right lung from probable fracture of rib. Second day, 6 A. M., no better; beginning emphysema over anterior aspect of right lung; 11 A. M., emphysema extends all over right side from buttocks to scalp, and is beginning to appear on left side. The emphysema gradually extended from the hips to the top of the head, except a space about the size of a silver dollar on the occipital bone, involving all the body—right arm as far as hand, and left as far as the elbow. For three weeks his condition was critical, he having a succession of attacks of coughing, dyspnœa, and collapse. Twice he seemed to be in *articulo mortis*. His respiration would go to sixty, and his circulation would be uncountable. After the third week his improvement was gradual but constant, perfect recovery eventually taking place.

We are compelled to look upon each case as a most probable medico legal case. Often the surgeon is the only wit-

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ness who can give the past, present and probable future of the case—the company depending entirely on his opinion in the majority of the cases that are settled by arbitration. He is in the habit of following these rules:

1st. In a case of importance, or when there can be any question of diagnosis, avail yourself of counsel, even if you have to pay for it.

2d. Never inquire into the details of an accident farther than it concerns your professional work. This will save you some annoyance on the witness stand.

3d. And most important, keep notes of every case of railroad injury, no matter how trivial it may seem at the time. These cases are usually postponed as long as possible; and no matter how clear a case is while you are attending it, as time passes, if it is not a most unusual one, you forget all about it.

In discussion, Dr. W. H. Elliott objected to plaster bandage, because it would not give or adapt itself if swelling occurs. He recommended a flannel bandage covered with a coat of plaster, opened the whole length of splint, so as to allow it to adjust itself to parts if swelling occurs.

Dr. A. P. Taylor thought it safer to operate after shock consequent upon injury.

Dr. P. L. Hillsman favored the view of Dr. Taylor as regards the time of operating. He had found a dressing of oxide of zinc and glue on flannel very serviceable. Shellac on flannel also made a convenient dressing.

Dr. Westmoreland advocated the immediate use of plaster dressing, if there was not much bruising of parts and if seen before swelling began. Swelling was frequently due to mobility of bones, and plaster will prevent this. He thought it best to operate during shock, if it was not too severe, as the injury and operation would be but one continuous shock, whereas the patient would be subjected to an additional shock if operation was delayed. Favored warm douche during operation, if it lessened shock. Plaster is very porous, and so is less liable to cause excoriations of skin than other dressings.

Dr. Westmoreland spoke on the "*Surgery of the Past, Present, and Future.*"

Fibro-Sarcoma—The Advisability of Its Removal.

During the afternoon, Dr. W. L. Bullard, of Columbus, Ga., reported the case of a patient, age 57. Over two years ago he had severe pain over the eye, which lasted a short

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time. Then there was insufficiency of the internal superior rectus muscle. On palpation, a small growth was discovered in the upper nasal side of the orbital cavity behind the ball. Not being allowed to extirpate the growth, he prescribed kali iodidi in increasing doses, with corrosive sublimate. Several weeks later the patient detected the tumor, though he still objected to operation. At this time there existed optic neuritis, and vision, which was $\frac{xx}{200}$, continued to decrease to complete blindness. Specific remedies seemed to have no effect. So he was put on arsenic, as advised for malignant growths by Dr. Long, of Cuthbert, Ga., but the growth continued to rise. By this time the tumor had bulged from the forehead, and had attained the size of of a large apple, perfectly smooth, and to the touch as hard as bone, but with a needle its whole depth could be easily penetrated down to the frontal bone, which disabused our minds of the idea of a bony tumor. Shortly after this, from its increase in size, and from constriction of the blood vessels, its natural color changed to that of a congested and purplish hue and convoluted roughness. At this stage Dr. Bullard tried electrolysis, using six or ten cells, but, being quite painful, was not used persistently, as it should have been, for this somewhat checked its further development.

After weeks (about seventeen months ago), on account of the size of the growth, and no evidence of its being encapsulated, Dr. B. was dubious as to what to do. But, with the help of Drs. Hurt, Walker, and Blanchard, he (with knife) divided the tumor the whole length down to the bone. The skin was infiltrated—indeed, there was no line of demarcation between the skin and tumor; and thus, being deprived of a flap, was forced to suspend the operation. The incision was washed with bichloride solution, brought together, and held in apposition by sutures, and healed by first intention. Several months afterwards the tumor had somewhat changed, so much so that the constricted conjunctiva had all disappeared; in fact, there seems to be no undue pressure in the orbital cavity, the place where first discovered, but the eye is covered by the tumor hanging over it from above. This unfortunate man is still asking for help. Dr. Bullard is doubtful as to favorable prognosis. He asks as to the advisability of etherizing the patient and excising the tumor *in toto*, and with antiseptic dressing, leaving the wound to heal by granulation, or plunge a platinum anode perpendicularly into the tumor, down to its presumed point of implantation, with three to five cathodes

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placed on the periphery of the growth, and destroy it at a single operation, by closing the current, and rapidly carry it to forty or sixty elements, charring the growth, leaving it to slough and heal by granulation. The patient is now, and has been all the time, in good health, with no syphilitic history or cancerous diathesis.

Dr. Gaston examined patient, and found the tumor movable to a limited extent; adhesions firmer on the inner than on outer portion of frontal bone. The nodular irregularity of superficial portion had greater density in some parts than others, and the purplish discoloration and enlargement of cutaneous veins lead to the suspicion that the tumor is encephaloid. He referred to the malignancy of such disease and proneness to reproduction when removed. It had extended to the orbit, and by pressure on optic nerve destroyed sight. If a diagnosis of fibro-sarcoma should be verified, there would not be so much danger of redevelopment. In view of the rapid growth of the tumor he recommended its removal, allowing the large denuded surface to heal by granulation.

Dr. K. P. Moore read a paper on "*The Female Urethra—a Source of Trouble Liable to be Overlooked in our Gynecological Investigations.*"

Dr. J. G. Ernest emphasized the importance of a thorough examination of urethra, and to dilate it if necessary. Thorough excision is the only treatment for caruncles.

While Dr. Virgil O. Hardon thought excision the proper treatment for caruncles, warned against cutting into cellular tissue, as it often leads to cicatrical tissue, which will be followed by unpleasant symptoms. Dilatation of the urethra for examination should be done very cautiously, as it sometimes leads to inconvenience. He spoke of the simplicity and efficacy of Emmet's button-hole operation for chronic urethritis. Diseases of urethra are not very common. Blame was very often referred to the urethra, when its true source was to be found with the uterus.

Dr. Moore read a paper by Dr. A. C. Davidson, of Sharon, on "*A Unique Case of Senile Gangrene, Followed by a Bloodless Operation Without Tourniquet or Ligature.*"

Dr. McHatton read a peper by Dr. H. J. Williams, of Macon, on "*The Importance of Microscopical and Chemical Analysis of the Urine.*"

Dr. McHatton spoke of the importance of feeding in kidney affections. He gives no medicine except when there is not sufficient excretion of urea.

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Dr. Todd said in all cases of senile gangrene seen by him the urine contained sugar. He also found sugar in urine of seven out of eight patients treated for carbuncle past middle life. He spoke of the efficacy of pilocarpine and sweat baths as diuretics.

Dr. A. W. Griggs spoke of the value of chloroform in acute albuminuria—dose gtt. xii. increased to gtt. xx. every five hours.

Dr. J. W. Duncan had found chloroform a valuable agent in albuminuria, and wished to corroborate the remarks of Dr. Griggs.

Thursday evening—banquet.

THIRD DAY.—The President *pro tem.* announced that Dr. Holmes had appointed Dr. Lindsay Johnson, of Cartersville, as the next annual orator.

Dr. R. O. Cotter next read a paper on "*Notes on the Progress of Opthalmology and Rhinology.*"

In discussion, Dr. Calhoun, of Atlanta, spoke of the advantage of antisepsis in operations about the eye. He had made 135 cataract operations without a single bad result, and he thought the good results due largely to antisepsis.

The Nominating Committee made the following report, which was adopted: President, Dr. A. W. Griggs; Vice-Presidents, Drs. J. A. Dunwoody and E. W. Lane; Censor, Dr. H. McHatton. Place of meeting 1891, Augusta.

Dr. J. A. Butts made a few remarks on "*The Climatology of Brunswick,*" claiming that it was anti-tubercular, anti-rheumatic, and antimalarial.

Dr. Todd spoke of the benefit of the climate to asthmatics.

Dr. Hopkins endorsed the statements made by Dr. Butts.

The Secretary read a paper by Dr. R. O. Engram on "*Strictures of the Male Urethra and Forms of Neuroses.*"

Dr. Gaston said the paper furnished some new ideas to him—among others, the intricate relations between urethral troubles and skin lesions. He didn't agree with the author in attributing varicocele to urethral troubles. Varicocele often exists where there is no concomitant of this nature, and no instances are cited where relief of stricture was followed by relief of varicocele. The ataxic phenomina said to be relieved by dilatation of urethra are not conclusively demonstrated. He recognized the efficacy of introducing metallic sound for seminal emissions, but deprecated the cutting and all violent dilating of urethra in treatment of seminal weakness. He didn't believe in dilatation after

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internal urethrotomy. Pass sound after operation to see if stricture is cut, and then let it rest for ten days.

The President continued same committees on programme, publication, and prize essays.

On motion of Dr. Gaston, an honorarium of $100 each was tendered the Secretary and Treasurer.

On motion of Dr. Foster, a committee was appointed to be known as the Committee on Membership. This committee will be expected to correspond with all physicians in the State not members of the Association, and ascertain why they are not members, and in every possible way enlist the interest of the profession in the Association.

Dr. A. W. Griggs, the President-elect, was installed.

After resolutions of thanks, the Association adjourned to meet in Augusta the third Wednesday in April, 1891.

Probably Psoas Abscess and Fistula Into Colon.

Dr. J. McF. Gaston reported the case of a gentleman about 32 years old, who was attended in consultation during the summer of 1888, who presented symptoms of acute psoas abscess, with high fever for several days. The pain was limited to the right iliac region and right lumbar region. After a time there developed a well-marked prominence in front of right kidney, extending forward above the crest of the ilium into the iliac region. There was in the mean time febrile excitement alternating with chilliness and great tenderness upon pressure, with a sense of deep fluctuation on palpation over the prominence. With these indications of a psoas abscess, at the expiration of a week an opening was made for its evacuation; but on the following day the prominence had disappeared, and there was no evidence of fluctuation where it had previously existed.

Instead of making the incision as intended, an exploratory puncture was made at the most salient aspect of the right lumbar region, about midway between the false ribs and crest of the ilium. It passed by suction through a dense membrane into a cavity without any discharge, and it was then evident that the abscess had found an outlet into the colon where it lies in contact with the muscles. On the following morning there were free evacuations from the bowels, as there had been frequently during the previous week; yet it was stated that a physician, who was called to the case subsequently, treated the patient for fæcal impaction, and attributed the previous disorder to constipa-

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tion of the bowels. The patient afterwards returned to Jacksonville, Fla., where he was under treatment of Dr. R. B. Burroughs for local trouble in the lumbar and iliac regions. He being unable to attend to his duties, returned to his home in Illinois, and sought the services of Dr. C. T. Parks, of Chicago, who made an incision on the dorsum of the right ilium about two inches below the crest. This entirely closed, and a swelling occurred between the cicatrix and the sacrum, which pointed and broke spontaneously into the line of the incision, from which a purulent discharge has continued for several weeks up to this time. Examination with a probe, this morning revealed a fistulous track extending from near the sacro-iliac symphysis, and the opinion expressed by those present was that the pus resulted from some carious bone in that vicinity calling for an operation. To elicit the judgment of others, members of the Association were invited to examine the patient. Dr. Gaston reports a corroboration of the previous opinion by those who made the subsequent examination.

FLORIDA MEDICAL ASSOCIATION.

When about 60 members had assembled in the hall in Ocala, April 8th, the Florida Medical Association was called to order by the President, Dr. R. A. Lancaster, of Gainesville. He at once delivered

The President's Address.

He referred to the success of the Association in securing a State Board of Health, and also a law to regulate the practice of medicine in Florida. While the latter law is not exactly what the Association wanted, it is better than no State Board of Medical Examiners. Instead of the eight Judicial District Boards, he urged that the law be changed so as to have one State Board. He thinks each examination should be on the merits of the applicant, and not limited to him or her who holds a diploma of graduation, for it has been abundantly shown that many colleges graduate incompetent matriculates. To examine homœopathic and eclectic applicants, he suggests that one eclectic and two homœopaths be added to the State Board so as to examine applicants who may prefer to practice on such exclusive dogmas. The Regular Members of the Board should be nominated by this State Association. Dr. Lancaster then

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proceeded in a most forcible way to impress the importance of the new State Health Laws, and urged physicians and people to render willing compliance to its requests and authority. The State Board of Health is the creature of this Association, and as such, this Association should seek such further legislation and appropriations as to perfect its work. He also urged that the Legislature be memorialized to provide for proper remuneration of physicians when called upon to give expert testimony before the civil courts. He closed with a stirring appeal to the doctors of the State to unite themselves with the State Association.

During the Second Day, Dr. R. P. Daniel, President of the State Board of Health, read an able report on matters pertaining to his Board.

Dr. Thomas P. Gary, of Ocala, read a paper on *New Medicines*—(in substance the same as the one in our April number).

Dr. F. H. Caldwell, of Sanford, read a valuable report on *Railroad Surgery*.

Dr. N. D. Phillips, of Gainesville, Fla., presented

The Report on Gynecology.

Two thousand years ago, Aristotle, a celebrated philosopher, said: "Probably all art and all wisdom have often been already fully explored, and again quite forgotten." A similar line of thought gave expression to the aphorism, "Progress is in the direction of a circle, rather than in a straight line."

The history of gynecology is rich in illustrations of the truth of these quotations from the writings of wise and thinking men of antiquity.

Not many decades ago the speculum, the sound, sponge tents, and in fact very many of the most valuable instruments and appliances of the gynecologist, were believed to be creatures of the present century. Yet a learned commentator on the works of Hippocrates, who lived more than four hundred years before the Christian era, asserts that "these works furnish the most indubitable proofs that the obstetric art had been cultivated with most extraordinary ability at an early period."

The writings of Celsus and Galen speak clearly of the use of the speculum vaginæ, in contradistinction to that of the speculum ani, in the first century. So that it is now known to have been described and used as far back as the very dawn of the Christian era; and it can easily be infer

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red that it existed and was used at a much earlier date; for the writer of any age gives a digest of what is known, not only by his contemporaries, but by his predecessors. It is claimed that the writings of Ætius, compiled in the sixth century, carry the student back in his researches over a thousand years to the time of Hippocrates, the "Father of Medicine." This writer had access to the wonderful library at Alexandria only a short time before its destruction. One is lost, bewildered, in contemplating what might have been revealed to the student of the arts and sciences by its six hundred thousand volumes, if it had been spared as a legacy for all future generations.

As further proof, positive proof, of the antiquity of the female speculum, and hence of the science of gynecology, and that "there is nothing new under the sun," a very few years ago, when the city of Pompeii was brought forth to the light of day, after a sleep of nearly eighteen centuries, and all the details of the habits and customs of its inhabitants, as they existed on that awful day of her burial, were subjected to the scrutiny of the curious a speculum vaginæ, not dissimilar to some that are in use to-day, was found. Was this speculum a young creature, a child in its infancy, when it, with the city of Pompeii, was overwhelmed by the dread Giant Vesuvius in the year A. D. 79? Who can say that it was not even then hoary with age? that it had not existed and witnessed the rise and fall of many nations, and the seasons in their order for many centuries, before it was entombed and lost to the sight and the memory of mankind?

After the vandal torch had consumed the great Alexandrian library, and following the valuable writings of Ætius of the sixth century, there is a period of many centuries in which gynecology seems to have been little heard or thought of. This period is rendered more obscure and impenetrable, as to our subject, by the decrees of the Moslem religion, which forbade examinations by sight and touch of the female genital organs by male physicians. And hence, while there was progress made in other branches of medicine, this religious interference acted as a complete bar to to progress in the investigation and treatment of diseases peculiar to women. None but women were permitted to see and touch the diseased female organs; and as the female M. D. did not then have a being, all examinations and all treatment of a local character were left to the ignorant midwives. Consequen ly all knowledge of the subject that had

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been handed down from the preceding centuries soon fell into disuse and decay; and gynecology became a lost art for a thousand years or more.

The re-discovery—if such it can be called—of the speculum by Recamier, in the early part of the present century, created a new interest in, and gave a new impetus to the investigation and treatment of female diseases. In spite of existing prejudices, it soon found its way into every civilized country. Medical men everywhere became active investigators in this long-neglected braneh of medicine. In no portion of the globe was there manifested more activity and deeper research than in our own country.

The new labor and progress inaugurated by the *renaissance* of the speculum in 1816, were more than redoubled about the middle of the present eentury, when J. Marion Sims gave to the world a new speculum and a few monographs on viseco-vaginal fistula and kindred subjects. The indefatigable labors, the wonderful ingenuity and skill of J. Marion Sims, had the effect of drawing the eyes of the medical world to this country, and in an incredibly short period of time, earned for him the title of "Father of American Gynecology."

So much has been accomplished by the Sims speculum that it has been enthusiastically and truthfully asserted that "it has been to diseases of the womb what the printing press is to civilization; what the compass is to the mariner; what steam is to navigation; what the telescope is to astronomy."

It was Sims who first made gynecology a specialty. Since his contributions to the science and art, the literature on this and allied subjects has gone on increasing, month after month and year ,almost in geometrical procession. Since his day, many able men have made and are making it a specialty, and are giving their life's work to it. To mention any names among the many great men thus engaged would be invidious. It is a matter of pride to us, however, that American men and minds have done their full share in contributing to its advancement; and in all future time, the names of many American gynecologists will be imperishably inscribed upon shafts of marble, erected to commemorate the achievements of those who are honored and loved as benefactors of the human race.

Dr. Jos. Y. Porter, State Health Officer, read a paper on

State Medicine.

He stated that State Medicine deals with the highest pos-

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sibilities of civilization. He spoke of the value of life to the State as well as to families, etc. He reviewed the tardy enactments of the Florida Legislature, until the State was frightened by the epidemic of 1888. The importance of vital statistics was well presented; but the year's experience had taught him the necessity of having paid agents in different sections of the State, so as to collect and compile vital statistics. Such information as could be secured by such a system of collecting statistics would be soon recognized as of incalculable monetary value to property owners, dealers in real estate, life insurance companies, etc., etc. Frights would be relieved, dangers could be removed, false statements could be contradicted, etc., and thus the material interests of the State would be materially advanced. He asks the Florida Medical Association to insist that a nomenclature of diseases, descriptive of the cause of death, etc., be adopted by the profession of the State. The Board of Health is in its infancy; but it is already evident that a matter of vital importance to the people which the Board must at once consider, is the purity of foods, water, etc. That many of the wells of Florida are shallow excavations that collect water by seepage, and frequently by drainage from dwellings, barnyards, etc., is well known. The fact that water from these wells is free from color and odor, argues nothing in favor of its healthfulness or harmlessness for human consumption, as very often such water, upon analysis, shows a large percentage of organic impurities and albuminoid ammonia in such quantity as to imperil the health of those using it. If people will drink such well water, they should be advised to boil it thoroughly, and aërate and filter it before using. A very good method, and simple in procedure to ascertain the quality of drinking water is: Place twelve grains of caustic potash, and three grains of permanganate of potassium in an ounce of distilled water, so as to get a testing solution. If to a glass of suspected water, one or two drops of this permanganate solution imparts a decided color, the water is safely drinkable; *but if*, on the contrary, the solution immediately loses color and disappears, the water should be rejected for drinking purposes as probably dangerous. Probably five grains of organic matter are oxidized by one grain of crystalized permanganate of potassium. Potassium permanganate loses its purple color in solution through oxidation in the presence of organic matter. Information of popular use is given by Dr. Porter's report regarding drainage of surface rain and marsh

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saturation by unglazed terra cotta pipes. For sewage drainage of cities, he unhesitatingly advocates the George R. Waring, (of Newport, R. I.,) system. Jacksonville and Pensacola, are the only two cities in Florida that can lay claim to possessing any system of sewerage at all. Good detail advice is also given as to disinfection of infected articles, of excreta, etc. Destruction by fire is sometimes required. He concludes his report with the statement that "Florida cannot be said to have any endemic disease that is not preventable."

Drs. Porter, Caldwell, and Phelps, were appointed a committee to consider the subject of a more uniform nomenclature of disease, etc., as suggested in Dr. Porter's report.

Dr. J. D. Fernandez, of Jacksonville, read a paper on *Microscopic Aid to Diagnosis*—illustrating his suggestions by exhibiting slides and drawings.

Dr. J. P. Wall, of Tampa, read an able paper on *Puerperal Convulsions*, which was made the more instructive by profitable discussion on the subject.

Dr. A. T. Cuzner, of Jacksonville, read a valuable paper on the *Influence of Microbes in la Grippe.* Thanks were voted the Doctor.

Dr. E. Van Hood, of Ocala, read a paper on *Gunshot Wounds*—reporting a case.

The Election of Officers for the ensuing year, resulted as follows: *President*, Dr. J. P. Gary, of Ocala; *Vice Presidents*, Drs. S. Stringer, of Brooksville, and J. Harris, of Pensacola. Dr. J. D. Fernandez, of Jacksonville, remains *Secretary.* The second Tuesday in April, 1891, was appointed as the time for the next Annual Session, which is to be in Pensacola.

Analyses, Selections, etc.

Hypodermatic Treatment of Asthma with Strychnine and Atropine.

The following is an original abstract of one of the evening lectures given by the Faculty of the Philadelphia Polyclinic in the course of 1889 and 1890, by Thomas J. Mays, M. D., Professor of Diseases of the Chest in the Philadelphia Polyclinic:

Asthma is essentially a spasmodic neurosis of the pneumogastric nerves. Its characteristic symptoms are its sud-

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den onset and subsidence; its proneness to recur during the night; the sense of oppression in the chest; the short, dry, wheezy cough; the marked dyspnœa; the fear of moving on the part of the patient; his utter misery, and his complete transformation into apparent robust health, so soon as the attack is over. The paroxysms may be rare at first, but tend to appear more frequently, and to last longer, until finally there is no complete intermission between them.

The exciting causes of asthma either reside in or outside of the lungs. Dust, or any other material suspended in the air, which, on being inhaled, produces irritation in the sensitive nerve-endings of the bronchial mucous membrane, are among the most common causes. The causes outside of the lung may exist in the nose, stomach, liver, intestines, uterus, etc., or in some specific cachexia. It is noteworthy that disorder of those organs which are supplied by branches of the pneumogastric nerves are most liable to excite an attack. It is doubtful, however, whether, without the peculiar predisposition, any degree of disorder in any, or in all of these organs, would have the power of inciting an attack.

The aim of treatment is (1), to alleviate the attack; and, (2), to prevent its recurrence. To achieve the former, atropine, morphine, lobelia, stramonium, chloral, chloroform, nitro-glycerine, nitrites, pilocarpine, etc., have been used; and various measures have been employed to break up the abnormal causal connection existing between other organs and asthma, as well as to allay irritation in the lungs. It must not be forgotten, however, that a general lowering of the nerve-tone of the body is often as much the cause of disease in other organs as it is of asthma, and hence, by invigorating the nervous system, the asthma, as well as its concomitants, disappear.

The possibility that strychnine, given hypodermatically, might be of value in treating asthma, was first suggested to me by the good results which were obtained by Dr. Eccheveria in the treatment of epilepsy with this alkaloid. Asthma is closely allied to the latter disease, and that which benefits the one should also benefit the other, at least on theoretical grounds. I have been using it daily in treating asthma during the last six months, and I believe with more prompt and more definite results than can be obtained from any other drug. My earlier cases were treated with strychnine alone; but, from a varied experience, I apprehend that the addition of atropine enhances its action, at least in

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old and stubborn cases. Below appear the histories of some of the cases which were treated with these agents. The first three were treated with strychnine alone, and the last three with the addition of atropine. I begin with $\frac{1}{50}$ or $\frac{1}{60}$ of a grain of strychnine, and $\frac{1}{100}$ of a grain of atropine daily, gradually increasing the former to $\frac{1}{20}$ or $\frac{1}{25}$ of a grain, and the latter to $\frac{1}{1000}$ of a grain. After a thorough impression is made on the disease, the drugs are administered every other day, and as the patient improves, are gradually abandoned. While some cases get well under this treatment alone, necessity, in others, demands that the influence of these agents are fortified by efforts which seek to control the causes of the attack, as well as by measures which aid in building up and in fortifying the general system.

Case I.—Male, aged 25, was first seen October 12th, 1889. For some time he complained of constant cough and nightly attacks of shortness of breath. The attacks came on suddenly about midnight, and subsided in a few hours. There were sibilant and mucous râles over the whole chest. Administered $\frac{1}{50}$ of a grain of strychnine. He had no attack the following night, and slept well. The cough also improved. He received the same daily dose for three days; afterwards, this was increased to $\frac{1}{15}$ of a grain every other day. By the 24th of the same month, the physical signs had all disappeared, and he was discharged. He received nothing but strychnine.

Case II.—Female, aged 30, consulted me November, 1889. Had occasional attacks of asthma since girlhood. Five years ago her ovaries were removed, and since that time her asthma is decidedly worse—recurring nearly every night at the present time. She also coughs and expectorates a good deal. Very little physical evidence of disease present in her lungs. She was placed on strychnine injections, at first, every day, and in doses sufficient to impress the system. Her attacks gradually diminished, and she had no return of them for six weeks, after which she failed to report. Additionally, she received cod-liver oil and phenacetin, the latter in four-grain doses three and four times a day.

Case III.—B., male, aged 30, came under observation December 1st, 1889. Suffering from asthmatic bronchitis for a number of years. The attacks appear nightly, and are preceded by cough and expectoration. Compelled to sit up for several hours during every paroxysm. The cough sound simulates that of pertussis. Is losing flesh. No dullness,

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but his lungs abound in fine râles towards the base of the chest. The strychnine injections relieved the cough, and shortened the duration of the dyspnœa in a very short time. In the course of four weeks he considered himself well, although there were still some râles at the base. Besides the strychnine, he received quinine, iron, and ammonia.

CASE IV.—M., male, aged 31. Plasterer. First seen November 14th, 1889, when he gave the following history: Cough for five or six years, and sudden attacks of shortness of breath, which usually come on about 3 or 4 o'clock in the morning, and sometimes continue for two or three days, which, during last year, became more severe. Unable to follow his vocation. Sibilant and mucous râles over the whole chest. He received $\frac{1}{33}$ of a grain of strychnine, and $\frac{1}{200}$ of a grain of atropine. November 20th.—Dyspnœa on exertion improved. Has had no attack since first injection. Says he feels better than he has for the last two months. Before he received the injections he was compelled to inhale the fumes of a "patent remedy" every morning before he was able to rise. This is no longer necessary. The injections were continued nearly every day until November 30th, when he felt able enough to go to work. Was seen December 19th. Been at work ever since, and, with the exception of two slight attacks, he has had no return of asthma. Prescribed hypophosphites. No more injections. March 14th, 1890.—Reports that he has had no asthma since last December. Sleeps well; cough slight; able to follow his trade for the first time during the winter season for two years. Chest clear of râles excepting a few at the base.

CASE V.—W., male, aged 37. Asthma since a child. Father died a drunkard, and patient addicted to alcoholic excess. October 17th, 1889, he received $\frac{1}{50}$ grain of strychnine about every other day until the 16th of November, with but slight amelioration in his condition. On this day he received strychnine $\frac{1}{25}$ of a grain, and atropine $\frac{1}{100}$ of a grain. After this time, the attacks abated somewhat; and in the next six weeks he had but one slight attack. He occasionally drank too much during time of treatment. At this period I lost sight of him, and am unable to say how he is at present.

CASE VI.—H., male, aged 51. Clerk. Was first seen December 2nd, 1889. Asthma for thirty years. Daily attacks during the last ten years. Cough and dyspnœa constant. Has been unable to lie down to sleep for eight years. Spends nearly all his time sitting with his elbows propped on the

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arms of his chair. All the sleep he gets is in that chair. The only relief he finds is in smoking "Jamestown weed." Appetite good, bowels irregular, stools changeable in color. Passes about half a pint of urine in twenty-four hours. Itchiness over the whole body. Much distress in the præcordia. Dropsy of the abdomen, scrotum, and lower extremities. His legs and abdomen are swollen so much that he is unable to wear his former-sized trousers, and the dropsical serum oozes so copiously through the skin below the knees that his drawers and socks become thoroughly saturated, and have to be changed two or three times a day. No dullness. Marked blowing inspiration in right apex. Chest filled with sibilant and mucous râles. Ten per cent. of albumen in the urine. Weight, 108 pounds. Mother and brother died of asthma. Strychnine and atropine at first daily, and then every other day. To relieve the dropsical effusion and constipation, concentrated doses of magnesium sulphate, alternated every other evening with the sodium phosphate. He also received seven and a half grains of antipyrin, powdered digitalis leaves, and quinine, each a grain, every four hours On December 13th, the albumen had entirely disappeared from the urine, and the dropsy was very much better. Passed two pints of urine, and his stools were of a normal color. December 24th.—No asthma since treatment began. Is now able to lie down and sleep a whole night without waking. Takes the antipyrin, digitalis, and quinine, only three times a day. Began taking cod-liver oil. January 17th, 1890.—Feels very good. No abnormal physical signs in chest. Not a trace of dropsy. March 18th, 1890. —No asthma since he came under observation. Weight, 114½ pounds.

(The last two patients were exhibited during the lecture.)

Experience with the subcutaneous use of these drugs in a number of other cases under observation at the present time convinces me that they are a valuable addition to the armamentarium of asthmatic therapeutics. Not only have I used these agents in asthma, but also found them of advantage in treating other forms of cough and dyspnœa.

Resorcin for Rodent Ulcer.

Dr. Chas. Szadek recommends (*Satellite*, April, 1890,) resorcin for various forms of skin diseases, particularly condyloma and verrucæ, in the form of ointment and powder. He reports a case of cure of rodent ulcer by using an ointment of resorcin and vaseline (25 per cent.)

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Editorial.

Strictures Upon the Medical Treatment of Prisoners at Andersonville Reviewed.

In a paper read before the Medical Society of the County of Kings, December 17, 1889, styled "Disease, Germs, and Disinfectants," and published in the *Brooklyn Medical Journal* April, 1890, Dr. John G. Johnston, of Brooklyn, makes use of the following language: "For more than a quarter of a century intelligent physicians have known that water contaminated with the stools of typhoid fever patients would produce typhoid in those who drank it. A most horrible abuse of this knowledge was used to destroy the lives of Union prisoners during the War of the Rebellion. Wurtz, an educated physician, arranged the prison pen at Andersonville on the side of a hill; a stream wound around the hill in the ravine below. He established the privies at the upper corner of this pen, near the river, where the soakage from these closets would run into the river, and compelled the men to get their water supply from the lower corner from this contaminated source. If any person attempted to dig for fresh water he was shot. The prison for the officers was in the ravine below, where the only water was this saturated from the privies."

It is a matter of sincere regret that a member of our profession should fall into the extravagant error contained in the above statement by Dr. Johnston in regard to the treatment of Union prisoners at Andersonville, cause of disease amongst them, etc During the period of the great civil war, and for some years thereafter, it was to be expected that the passions and prejudices engendered should sway the minds of men on both sides—sway them in fact to such an extent as to render them incapable of reaching proper conclusions upon any leading question arising out of the complications involved in this internecine contest. But it was scarcely to be expected that a physician in one of our leading cities, twenty-five years after the cessation of hostilities, should be so illy informed as to make declarations so rash and unfounded as those above quoted.

An examination of this subject in the most perfunctory manner would have shown how totally unfounded these declarations are. We are aware that politicians and partisans have industriously circulated reports of the most exaggerated nature in regard to the conduct of the war upon

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the part of the Confederates; but the time has at last come when these narratives will no longer pass current. The official reports published by the United States Government in regard to the late war are throwing much light upon all subject matters in dispute. We would refer Dr. Johnston to Part Third, Volume Third, "*Medical and Surgical History of the War of the Rebellion,*" where he can procure official statements in regard to many matters upon which he appears to be profoundly ignorant. We would especially call his attention to page 35 of this volume, where he will find full statements of diseases affecting Union prisoners at Andersonville, Ga. The medical reports show that during the time that this place was used as a prison there were 42,686 cases of injuries and disease. Of these, 16,772 were from diarrnœa and dysentery, 2,966 had malarial fever, while but 753 suffered from the various forms of continued fever. What does the logic of these figures portray? Either that the Doctor is all wrong in the matter as to the drinking water and the typhoid germs, or that the prisoners were most felicitous in avoiding the graver germs and gulping down those of a less noxious nature.

We would also call attention to the report in the same volume, page 62, of the mortality of Confederate prisoners confined in United States prisons during the war, especially the report of the prison authorities at Alton, Ill. Dr. Johnston will find that, for continued fevers, they had a mortality of 24.5 per cent., while at Andersonville there was a rate of 26 per cent. How did the Confederates at Alton contract these continued fevers, and why this rate of mortality? The surgeons of the United States army had at their command all essential requirements for the lodgment, hygienic and medical treatment of prisoners of war. The Confederate surgeons, in the way of supplies, had almost nothing, for the Union authorities had declared contraband all medical supplies attempted to be passed into the Confederacy, and had confiscated all such articles wherever found.

The refusal upon the part of the United States authorities to exchange prisoners during the latter part of the war, added greatly to the sufferings of these poor unfortunates upon both sides, and the moral responsibility absolutely rests upon the United States authorities for throwing obstacles in the way of an exchange of prisoners. (See General Grant's letters to Secretary Stanton upon this subject; also statement of General B. F. Butler as to why he was placed at Fortress Monroe, etc.)

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DISPATCH FROM GENERAL GRANT TO GENERAL B. F. BUTLER.

"CITY POINT, August 18, 1864.

"*To General Butler*,—I am satisfied with the chief object of your interview. Besides having the proper sanction, it meets with my entire approval. I have seen, from Southern papers, that a system of retaliation is going on in the South, which they keep from us and which we should stop in some way.

"On the subject of exchange, however, I differ with General Hitchcock. It is hard on our men held in Southern prisons not to exchange them, but it is humanity to those left in the ranks to fight our battles. Every man released on parole or otherwise, becomes an active soldier against us at once, either directly or indirectly. If we commence a system of exchange which liberates all prisoners taken, we will have to fight on until the whole South is exterminated. If we hold those caught, they amount to no more than dead men. At this particular time, to release all rebel prisoners North, would insure Sherman's defeat and would compromise our safety here.

[Signed] "U. S. GRANT,
"*Lieutenant-General.*"

We take it for granted that no one at this date will attempt to shift the responsibility in a Southern direction, as all the facts concerning exchange of prisoners are of easy access and bear official stamp.

Now, in regard to the statements respecting Andersonville. Dr. Johnston speaks of a river; there is no river at Andersonville. He speaks of officers confined at Andersonville; no commissioned officers were ever confined there. He speaks of "Wurtz" as a physician, etc. Wurz (the proper name) was by profession a medical man, but he did not officiate as such; he was a line officer, and had military charge of the prison. He had nothing to do with the management of the medical department. The surgeon who was in charge is at this time, and has been ever since the war, one of the leading medical men in this city. He informs us that the drinking water for the prisoners was obtained from a stream running through the enclosure from the upper part, while the privies and sinks were located down the stream, at a point just before it made its exit from the grounds. The privies were located at such a distance from the point where the drinking water was obtained, so as to render it absolutely impossible for it to be contaminated. He declares further, of his own knowledge, that all prison-

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ers were treated as humanely as it was possible under the embarrassed condition of the Confederate authorities in procuring food and medical supplies. The prisoners were served with the same rations, both in regard to quality and quantity, as were given the Confederate soldiers guarding them. The mortality rate of the Confederate guards was as great as that of the Union soldiers confined at Andersonville. Is this not a significant fact in regard to the observance of humanity, to say the least of it?

No; the North was enraged immediately after the war in consequence of the large number of soldiers who had lost their lives in what they chose to call the Southern prison pens, and there arose a howling demand for vengeance. The masses were ignorant of the fact that the responsibility of keeping these men in prison devolved upon their own authorities, and they knew little of the hardships, deprivations, prolonged suffering, and immense loss of life that had taken place amongst the Confederate soldiers confined in their prisons. For substantiation of the last-mentioned facts, see volume and work previously referred to.

The life of Wurz was demanded as an expiatory sacrifice, and under stress of surroundings the Union authorities weakly consented to his execution. Of course his trial was but the mere observance of a form. For this execution, as well as that of Mrs. Suratt, the day is not distant when the humane and patriotic element of our common country will feel most heartily ashamed.

The Prize of Dr. Hunter McGuire of $100,

Which is to be awarded at the session of the Medical Society of Virginia during its session at Rockbridge Alum Springs, Va., September 2–5, 1890, is open alike to the members of the Regular Profession in the States of Virginia, West Virginia, and North Carolina. At a recent session of the Executive Committee of the Medical Society of Virginia —acting for the said Society during the vacations of the same—the terms, as proposed by Dr. McGuire, were formally accepted. We will keep the Prize Offer as a standing advertisement in our Advertising Department (which see) until after the September issue. The subject is "*The Diagnosis, Pathology and Treatment of Chronic Cystitis in the Male.*"

The Board of Medical Examiners of North Carolina.

Will meet in Oxford, N. C., on Saturday, the 24th May, at 9 A. M., preceding the meeting of the Medical Society of North Carolina during the following week.

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The Attention of the Medical Corps of the Late Confederate Army and Navy

Is earnestly invited to the subjoined circular-letter of Dr. Joseph Jones, who himself has unselfishly contributed so much of lasting value to the Medical History of the Southern States. Now that battles are over, feelings changed into harmonious friendships, and peace that cannot be broken reigns all over the country, it is proper that records should be collected from every available source, showing what wonderful successes were secured under circumstances the most trying, and thus historically preserve the genius and patriotism of the medical men of the South:

OFFICE OF THE SURGEON-GENERAL
OF THE UNITED CONFEDERATE VETERANS,
156 WASHINGTON AVENUE,
NEW ORLEANS, LA., April 9, 1890.

To the Survivors of the Medical Corps of the Confederate States Army:

Comrades,—The surrender of the Army of Northern Virginia, on this day twenty-five years ago, practically ended the struggle for the independence of the Southern States; and during this quarter of a century death has thinned our ranks, and our corps can now oppose but a broken line in the great struggle against human suffering, disease, and death.

S. P. Moore, Surgeon-General of the Confederate Army, is dead. Surgeons L. Guild, A. J. Foard, J. H. Berrien, J. T. Darby, W. A. Carrington, F. A. Ramsay, Samuel Choppin, R. J. Breckinridge, E. N. Coney, E. S. Gailliard, E. A. Flewellen, A. N. Talley, Paul F. Eve, O. F. Manson, Louis D. Ford, —— Habersham, James Bolton, and a host of others of the Confederate States Army, all are dead.

The Association of the United Confederate Veterans was formed in New Orleans in 1889, the objects of which are historic, social, and benevolent.

Our illustrious Commanding General, John B. Gordon, Governor of Georgia, has ordered the United Confederate Veterans to assemble in Chattanooga, Tenn., on July 2d, 1890. It is earnestly hoped that every surviving member of the Medical Corps of the Confederate Army will meet with the United Confederate Veterans upon this important occasion, and promote, by his presence and his counsels, the sacred interests of the Association of the United Confederate Veterans.

It is of the greatest importance to the future historians, and also to the honor and welfare of the medical profession

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in the South, that careful records should be furnished the Surgeon-General of the United Confederate Veterans, embracing the following data:

1st. Name, age, nativity, date of commission in the Confederate States Army, nature and length of service of each and every member of the Medical Corps of the Confederate States Army.

2d. Obituary notices and records of all deceased members of the Medical Corps of the Confederate Army.

3d. The titles and copies of all field and hospital reports of the Medical Corps of the Confederate Army.

4th. Titles and copies of all published and unpublished reports relating to military surgery and diseases of armies, camps, hospitals, and prisons.

The object proposed to be accomplished by the Surgeon-General of the United Confederate Veterans is the collection, classification, preservation, and final publication of all the documents and facts bearing upon the history and labors of the Medical Corps of the Confederate States Army during the civil war from 1861 to 1865. Everything which relates to this critical period of our national history, which shall illustrate the patriotic, self-sacrificing, and scientific labors of the Medical Corps of the Confederate States Army, and which shall vindicate the truth of history, should be industriously collated, filed, and finally published.

It is believed that invaluable documents are scattered over the whole land, in the hands of the survivors of the civil war of 1861–1865, which will form material for correct delineation of the medical history of the corps which played so important a part in the great historic drama.

Death is daily thinning our ranks, whilst time is laying its heavy hands upon the heads of those whose hair is already whitening with the advance of years and the burden of care.

No delay, fellow-comrades, should be suffered in the collection and preservation of these precious documents. The collection of cases and facts relating to the medical history of the Confederate Army invites the immediate attention and co-operation of his honored comrades and beloved compatriots throughout the South.

Respectfully, your obedient servant,

JOSEPH JONES, M. D.,
Surgeon-General United Confederate Veterans.

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The Medical Examining Board of Virginia

Held its usual Semi-Annual Session in Richmond, Va., April 8th, 9th, and 10th. We had hoped to present a full record in this issue; but the change of officers, due to the resignation of the old ones, has compelled a delay in the preparation of manuscripts, etc. The full report of the proceedings of the recent session are, however, provided for our June number. We will not anticipate the items of that report further than to mention the resignation of the President, Dr. Hugh T. Nelson, of Charlottesville, from the Board because of his election to a position in the Medical Faculty of the University of Virginia. The former Secretary of the Board, Dr. Hugh M. Taylor, of Richmond, was thereupon elected President of the Board for the unexpired term of two and a half years; and Dr. Paulus Irving, of Farmville, was elected Secretary. Dr. R. A. Lewis, of Richmond, has also resigned his membership of the Board.

To fill these vacancies in the membership of the Board from the Third and Seventh Congressional Districts of Virginia respectively, caused by the resignations of Drs. Lewis and Nelson, the Executive Committee of the Medical Society of Virginia has, in due form, nominated, for the Governor's Commissions, Dr. Benjamin Harrison, of Richmond, and Dr. J. Edgar Chancellor, of University of Virginia, whose reputation is not limited to his State, but who has filled, with credit and distinction, positions of professional trust in Virginia and elsewhere. The selections are both excellent.

Western Pennsylvania Medical College Graduates.

The fourth annual commencement exercises were held March 27th. The degree of Doctor of Medicine was conferred on 29 graduates, being about 25 per cent. of the class in attendance during the session. The Faculty entertained the Alumni Association (now numbering 120) at a banquet the same evening.

The Convention for the Revision of the United States Pharmacopœia

Was held in Washington May 7–9. Notes of its proceedings will be given in our next issue.

Book Notices.

We regret exceedingly that a number of book notices are crowded out of this issue, as well as other matter that had been prepared for it.

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The Proceedings of the State Medical Societies of Georgia, Florida, Alabama, and Tennessee

Are reported in this May number as fully as our notes would permit. The sessions were all held during April, and were pleasurable and profitable to those in attendance. In fact, some of the papers presented were of rare merit, but, unfortunately, they will be buried in the usual annual volumes of *Transactions*. It is evident some change is to be made in the manner of publication of such papers as are of *general* professional service. Southern authors that are entitled to national reputation must rise above their feelings of modesty—whether real or mocked—and make their contributions of study, investigation, or discovery, sufficiently known to impress the medical public with the truths and suggestions they enunciate, as do our Northern and Western professional brethren. It is due to themselves, to their section, to the profession at large, and to humanity, that they should let their lights so shine that others in want of just that information which they possess may be guided safely over the shoals of doubt and ignorance. Such authors should at least give a willing help to those journals that seek to promote their interests by publishing the results of their investigations—especially when these journals pay them the compliment of soliciting synopses or abstracts of their papers. Helping others is helping yourself.

The Forty-First Annual Meeting of the American Medical Association

Will be held in Nashville, Tenn., May 20–23, 1890. Unusually elaborate preparations for a large and profitable meeting have been made by the Local Committee of Arrangements. We wish the Southern profession would take more interest in attending the sessions of this Association. We are persuaded that if the meetings of the American Medical Association were held at some other season of the year than so soon after the annual sessions of the various State Societies, the attendance would be larger, and thus more enthusiasm would be manifested in the Association work by the profession at large.

Information Wanted About Operations for Hypertrophy of the Prostate.

Dr. Wm. T. Belfield, 612 Opera House Building, Chicago, Ill., respectfully solicits information concerning unpublished

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cases of operations upon the prostate, especially for the relief of the so-called hypertrophy of the organ.

The Medical Society of the State of West Virginia

Will hold its twenty-third annual session in Wheeling, W. Va., June 11th, 12th, and 13th. The preliminary circular of the Secretary (Dr. J. L. Fullerton, of Charleston, W. Va.) is out, and shows great industry. The prospect is very encouraging for an excellent session.

Obituary Record.

Dr. R. C. Powell,

One of the most worthy citizens and best known physicians of Alexandria, Va., died from a complication of diseases, at his home, May 9th, 1890. Aged about 53 years. At the outbreak of the civil war, he resigned his rank in the United States Navy and enlisted as a private in the 17th Virginia Regiment. He was soon transferred to the Confederate Navy, and rendered valuable service as surgeon in charge of the Marine Hospital on the Gulf of Mexico, with headquarters at Mobile. After the war, with other Confederate naval officers, he entered the service of the United States of Colombia in its War for Independence. On his return home, he commenced the practice of his profession, and soon took high rank among the physicians of his section. He joined the Medical Society of Virginia in 1872, and ever afterwards manifested intensest interest in its success. He contributed several papers to its *Transactions*, and to the medical journals, which have left their impress on the minds of his readers.

Death from a Cat-Bite.

The daily papers report that David Stores (colored), of Rockingham county, N. C., struck a pet cat of the ordinary variety, when the enraged animal made a spring at him and fastened its teeth in his wrist. The cat held on with a death-grip, and every effort to tear it away proved unsuccessful. It finally became necessary to kill the cat, and its head had to be cut off before the death-grip could be relaxed. Stores was taken sick and soon died, although no symptoms of hydrophobia developed.

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VIRGINIA
MEDICAL MONTHLY.

VOLUME XVII—No. 3. WHOLE NUMBER, 195.

RICHMOND, JUNE, 1890.

Original Communications

ART. I.—The Alexander Operation—Report of a Case.*

By HENRY D. FRY, M. D., of Washington, D. C.

During February, 1890, I was consulted by Mrs. H. for prolapse of the vaginal wall. She was 60 years of age, and had given birth to eight children, the youngest being 20 years old.

Examination revealed the bladder and rectum protruding through the vulvar opening in the shape of two large tumors. The perineum was not ruptured, but had lost all supporting power from relaxation. The uterus was small, movable, retroverted, and lying upon the floor of the pelvis.

It was proposed to strengthen the pelvic floor by performing a posterior colporrhaphy, and then retain the uterus in position with a pessary; or, to attain the second object, by shortening the round ligaments after the method of Alexander. The patient preferred the latter, as she was averse to the use of pessaries.

Accordingly, on March 18th, assisted by Drs. Deale, Ellyson, and Snowden, she was etherized and the two operations performed. An incision was made about one inch and a half on the left side, extending from the pubic spine, up-

* Read before the Medical Society of the District of Columbia.

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wards and outwards, parallel to Poupart's ligament. The external abdominal ring was exposed, and by drawing out the fat and loose cellular tissue that filled the opening, the round ligament was found. It was of good size, but firmly attached by adhesions to the whole length of the inguinal canal. After these had been broken up by using the handle of the knife, and the finger, it required strong traction to overcome intra-pelvic adhesions. These, however, yielded gradually, and several inches of the cord were withdrawn. Some delay was necessary to find the right ligament. It was smaller, and about four inches of it came out without using force. The uterus was put in position, and held with a sound, while the ligaments were secured. In an unfortunate effort to draw out more of the round ligament on the left side, it broke off beyond the internal ring.

The right ligament was fastened in the wound by passing two silver wire sutures through it, and the tissues of both sides at the upper end of the incision. The rest of the incision was left to heal by granulation.

Posterior colporrhaphy was then performed and the wound sutured with silver wire. Some hæmorrhage occurred during the night, and the next morning numerous clots were washed out of the vagina. The case convalesced satisfactorily, except some feverishness for about one week. The temperature never went higher than 100.4°, and was attributed to mild sepsis from the vaginal wound—a small blood-clot in the submucous tissue being most likely the seat of decomposition. The wounds in the groin granulated nicely, and secured firm union of the parts.

The patient was kept in bed five weeks, and a pessary introduced before allowing her to get up.

The uterus is now in good position, but it will require the lapse of time to say what will be the ultimate result of the operation.

I hope for success, as among the cases reported by different operators are some that resulted favorably when only one ligament had been secured. The failure to shorten both were due, in some of these cases, to the same accident that happened in this; in others, it resulted from failure to find but one, and in others again, one round ligament was so atrophied that it was useless.

I was influenced to treat the wounds by the open method for several reasons. Having secured the ligament by sutur-

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ing it to the pillars of the external abdominal ring, union of the divided parts would be firmer by allowing the wound to heal by granulation, and the redundant ligament being included in the cicatricial tissue, would be more securely fastened.

Mundé closed the wound in all his cases, but states that in 25 per cent. he failed to secure union without suppuration.

Hernia has occurred repeatedly after the performance of Alexander's operation. This was due most likely to excessive manipulation of the parts in searching for the ligaments, or to imperfect closure by sutures of the external ring.

I believe the firm cicatrix, resulting from union by granulation, offers an efficient barrier against this accident.

The few fatal cases of Alexander's operation on record were due to deficient drainage. Retained serum, or blood decomposed in the wound, set up septic peritonitis.

This is now guarded against by inserting a drainage-tube before closing the wound. By the open method, however, we secure the most effectual drainage, and diminish, to a minimum, the danger of septic infection.

The wound was washed with a carbolized solution, and packed with iodoform gauze. Over this was placed a piece of absorbent cotton, and the dressing kept in position with adhesive strips.

An objection to be made against the method of treatment here proposed is the length of time required for the healing process. But this is not so much an objection after all, as the proper after-treatment of the case demands that the patient remain in bed about four weeks. The resulting scars will not disfigure the parts, as it is concealed by the hair.

More than eight years have now passed since Alexander performed his first operation for shortening the round ligaments. In spite of the many theoretical objections raised against it, the successful results obtained by a limited number of operators have done much to encourage others to follow their example. In this country, Kellogg, of Michigan,

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and Polk and Mundé, of New York, have been the most active workers. So far as I am aware, the subject has received little or no attention from the profession in this city, and on that account I have ventured to bring it up for discussion to-night.

The gratifying results that some gynecologists have experienced with the operation deserves that it should receive more recognition.

Among the various objections raised to shortening the round ligaments are: It is unphysiological to fasten the uterus immovably forward; the ligaments are not intended by nature to support the uterus, consequently they will stretch and displacement recur; and it will interfere with the enlargement of the womb should gestation occur. It is noticeable that the objections come from men who have little or no experience with the operation.

The first of these objections applies equally to the operation of hysterorhaphy. That the displacement has occurred after Alexander's operation, only proves that it has been too often performed in unsuitable cases. One gynecologist, who has had no little experience with the method, reports three cases upon which he operated for relief of procidentia. In one of the cases, the uterus measured four and a half inches—in the other, four inches; and in the third, five and one-half inches. In the last case, there was also a large subperitoneal fibroid. These were reported as having been successful, but it is more than probable that a later examination will change the result.

At first, too much was expected from the operation. In most instances it must be regarded merely as an auxiliary to other means. A heavy uterus must be reduced in size, a lacerated cervix repaired, a colporrhaphy or colpoperineorrhaphy performed, and as accessory to these operations, Alexander's is a valuable aid in restoring the condition of the parts.

The most promising cases of prolapsus for this method of treatment, are those which occur late in life. The uterus will generally be found atrophied and movable. The gen-

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erative function has ceased and the complication of subsequent pregnancies is avoided.

It is well to mention, however, that different operators have had the opportunity of watching the behavior of the uterus under these circumstances, and they all attest that gestation progressed normally, and that the organ returned to its proper position after child-birth.

By shortening the round ligaments to relieve descensus, it is not with the expectation that the uterus will be kept suspended. It is for the purpose of drawing the fundus forward, so that the wave of intra-abdominal pressure will fall upon the posterior aspect of the uterus. The first step in prolapsus uteri is retro- displacement.

The benefits derived from Alexander's operation are not limited to the treatment of prolapsus uteri.

Kellogg has reported success in extreme anteversion and anteflexion. In these cases, the tension of the round ligaments, after being shortened, lifts up the fundus uteri.

It is, however, in retroversion alone, or combined with large and prolapsed ovaries, that the most gratifying results have been secured. In many cases of retro-displacement, it is impossible to wear a pessary on account of a tender ovary prolapsed into Douglas' pouch. In these cases, provided there be no adhesions, the shortened round ligaments will relieve the displacement and draw up the enlarged ovary. Relief has been obtained in other instances where the uterine position was not so much at fault as that of the ovaries, which were enlarged and prolapsed.

The last report of Dr. Kellogg,* which I have had the pleasure of reading, contained the record of 73 cases. Of these 73, he says, "all but eight were cases of retroversion or retroflexion, and in nearly every one of these there was pronounced ovarian prolapse and more or less enlargement and tenderness of the ovaries.

The usual distressing symptoms which accompany these conditions were present, and, with the exception of two or

*Trans Mich. State Medical Society, 1890.

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three cases, pessaries could not be tolerated for more than a week or two at a time, and had been abandoned, as worse than useless, after many trials."

Many cases, similar to the above, have been subjected to laparotomy and removal of the appendages. Before removing the tubes and ovaries, a trial of Alexander's operation is certainly justifiable in such of these cases as offer any hope of relief. The danger of the operation is almost nil, and, if it be successful, the woman is not unsexed.

In some of the cases operated upon, the result has been successful anatomically, but not therapeutically. This is due to the co-existence of diseases of the uterus and appendages other than displacement.

Cystic degeneration of the ovaries, salpingitis, hydro- and pyosalpinx are conditions still demanding removal to obtain a cure.

Alexander says,* "the anatomical cure of a retroflexion by shortening the round ligament, is a most certain result of the operation—fifty-four out of fifty-eight being successful, as far as I know."

Out of twenty-seven retroflexions, he reports that all were anatomical successes, and only one a therapeutical failure, which was subsequently cured by removal of cystic ovaries. In a good many such cases, he states, the operation has rendered unnecessary the removal of the appendages, and, in several cases, inflamed appendages have recovered rapidly after replacing the uterus in its normal position.

The uncertainty of finding the round ligaments deters many from attempting this operation. The fancied difficulty arises from the reports of some operators who, unfortunately, failed in the attempt, and from the directions that were first published regarding the careful dissection necessary. The early descriptions of the operation are very similar to the directions given in surgical works for cutting the various coverings of a strangulated hernia. In one, as in the other, all that is necessary is to know the anatomy of the parts and to recognize the different structures when seen.

*Trans. Ninth International Medical Congress, 1890. p 747.

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Kellogg has modified the method in such manner that, instead of searching for the ligament at its exit from the external ring, he opens the inguinal canal one inch below the internal ring; the ligament at this point is larger, and, he claims, much more easily found. After freeing it from its sheath of connective tissue, which is obtained at the internal ring, the ligament yields easily to traction.

It is the attachment of this sheath which he claims simulates adhesions of the cord to the canal.

In the case reported at the beginning of this paper, attention is called to the adhesion of one ligament which led to its rupture in the attempt to drag it out.

In Kellogg's last 45 operations, he had 43 successful ones. Out of his 73 operations he reports 54 cured; 10 relieved and 9 were failures. The failures were among his first cases, and he attributed them to, 1st, faulty method of operating; 2d, neglect to perform a necessary colporrhaphy; and 3d, to permitting the patient to return home without a pessary. In six of the failures, the patients passed out of his hands too soon.

In regard to the 54 cases reported as successful, he says:

"With hardly an exception, these 54 persons were hopeless invalids, who had been drifting about for years from one doctor to another without relief, and had finally been reduced to a condition of almost total despair as regards recovery of their health, and were almost completely helpless; in some cases, entirely so."

ART. II.—**The Use and Abuse of Antipyretics.***

By GEORGE W. HIPKISS, M. D., of Chatanooga, Tenn.

It is my purpose before entering upon the discussion of my subject to briefly outline the views relative to fever held to-day.

Fever does not consist of the single symptom of elevation of temperature, but is a complex group of symptoms in

* Read before Chatanooga Medical Society, May 2d, 1890.

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which disordered heat occupies the dominant position, having intimately associated with it the other symptoms of this group—disordered circulatory and respiratory functions, loss of muscular power, digestive derangement, changes in glandular secretions, notably of the kidneys, impaired nutrition, tissue changes, loss in weight, and disturbances of the nervous system.

The cause of the elevation of temperature is by no means yet adjusted, although during the past two or three years greater advances have been made than ever before towards solution.

The combustion theory, the hæmic, the zymotic, the traumatic, the chemical, the nervous, and other theories, each has its advocates; but the weight of evidence give to the *nervous theory* the highest position.

The nervous theory of fever rests upon three factors—heat production, heat regulation, and heat discharge; and thus the normal as well as abnormal temperatures can be explained by the predominance in varying degree of each of these processes.

The vaso-moto apparatus was long since demonstrated to control the circulation of blood in the superficial part of the body, thereby in a great measure, controlling the discharge of heat; the other factors in the process of heat-discharging—respiratory and sudorific—are equally well under the control of the nervous system.

Heat production is in a fair way of definite localization. There is certainly an inhibitory centre which depresses or controls the production of heat, probably by acting on the trophic cells of the gray matter of the spinal cord. There are also cerebro-spinal centres, which when stimulated, excite heat production.

Heat regulation has not yet been localized. It has been described as least organized, least automatic, least and last developed. It co-ordinates heat dissipation with heat production. Thermal ataxia implies irregularity of temperature and that alone.

"Thermotaxic and thermogenic disorders when co-existing, imply ordinary fever, while disorder of all heat

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regulation, heat production and heat dissipation, implies a dangerous increase of heat, a steadily rising temperature, a general hyperpyrexia of extreme gravity.

Puncture of the candate nucleus and injury to the spinal cord in the upper cervical region, have each been conclusively demonstrated to be causative of increase heat production and an elevation of temperature, and these experiments among animals have induced all the essential conditions, viz: increased heat production, increased heat loss, increased absorption of oxygen, increased formation of water and carbonic acid gas, and large increase in formation and elimination of urea, with corresponding changes in pulse and temperature curves.

Gaskell draws the conclusions that inhibition, for instance, of the heart's muscle, is restorative, though the influence of the pneumogastric nerve, and that the accelator nerves of the heart induce opposite or destructive changes, and that the muscular substance when disintegrated gives rise to heat and mechanical work.

If it be found (Welch), that similar inhibitory and accelerator nerves preside over the chemical changes in voluntary muscles and other tissues of the body, then Gaskell's induction as to the existence of thermo-excitory and thermo-inhibitory nerves, ranks as one of the most profound and important in modern physiology.

According to Maclagan, the thermal nervous apparatus, consists of: 1st. Tissues in which heat is found; 2nd. Heat eliminating surface; 3rd. A termic centre, controlling heat; 4th. Nerves from the central controlling power to the heat, forming parts of the body; 5th. Nerves connecting the heart, controlling centre with the parts involved in heat elimination.

So long as all these parts of the thermal apparatus are in harmonious operation, normal temperature prevails, but interruption of this harmony, causes the temperature to rise or fall.

He does not regard as antagonistic the two theories of fever which have secured the strong foothold, viz; the combustion and the nervous theories; he regards each as complete in itself, that the combustion theory, "according to which the rise of temperature results from increased activity of the processes by which heat is naturally formed in the body," is in no way inconsistent with the neurotic theory, according to which the rise of temperature is due to the impairment of the inhibitory force, by which heat production is restrained and kept within normal limits.

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According to Austin Flint, it is probable that the original cause of most, if not all the essential fever, is a micro-organism, different in character in different forms of fever. He regards the pyrexia as due to the oxidation of certain constituents of the tissues due to micro-organisms in the blood; that this oxidation results in complete waste of tissue, and is represented by an excess of carbonic acid and urea excreted. He defines an essential fever "as an excessive production of heat in the body, induced by a special morbific agent or agents, and due to excessive oxidation, with destruction of the tissues of the body, and either a suppression or a considerable diminution in the production of water."

The bacteriological theory of the etiology of fever and the need of a high temperature to rid the system of the germs, has many able advocates, especially among the Germans. Welch says:—There is much which speaks in favor of this doctrine. The real enemy in most fevers is the noxious substance which invades the body, and there is nothing to prevent us from believing that fever is the weapon employed by nature to combat the assaults of this enemy. The supposition seems more probable that the increased oxidation of fever aids in the destruction of the injurious substance.

With this change of opinion concerning the nature of fever, comes also a change of opinion in relation to the harmful effects of high temperature.

Prof. Welch takes the ground "that even in fever, such as typhoid fever and pneumonia, when the height of the temperature is undoubtedly a most important index of the severity of the disease, there exists no such parallelism between the temperature and the nature and severity of the other symptoms, as we should expect if these symptoms were caused by the increased heat of the body, and both clinical and experimental observations strongly support the view now widely accepted, that the disturbances of the sensorium, which constitute so prominent a part of the group of so-called typhoid symptoms, are dependent upon infection," or upon the poisonous substances produced in the

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body by the pathogenic micro-organisms rather than by high temperature.

Baruch says: "Since it may now be regarded as an established fact, that high temperature minus infection, does not produce those serious degenerations formerly ascribed to it, we must seek in the infection process and the ptomaine intoxication, those deleterious effects upon the vital organs which undermine the system and eventually cause death."

I have briefly outlined the views at present held in regard to fever, that we may better understand the application of antipyretics.

Antipyretics are remedies which reduce the temperature of the body in fever. They act much more powerfully when the temperature is abnormally high, than when it is normal.

Antipyretics may be divided into two great classes: those which lessen heat production, and those which increase heat discharge; and these may again be divided as follows:

Those which lessen heat production into those acting on tissue change; as quinine, carbolic acid, salicylic acid, salicylate of soda, camphor, alcohol, etc., etc., and those acting on the circulation generally as antimony salts, aconite, digitalis, veratrine, colchicum; locally as wet cupping, leeches, dry cupping, etc.

Those which increase heat discharge, may be divided into those which act by dilating the cutaneous vessels and increase radiation, as alcohol and nitrous ether; those which act as sudorifics, as the antimonial preparation, Dover's powder, nitrous ether; and those which act by abstracting heat from the body, as the cold bath, cold affusion, cold sponging, wet pack, ice to the surface, cold drinks, and cold enemata.

Antithermic remedies of recent date include all of the so-called aromatic series, the modern synthetical compounds. The true antithermics act absolutely (according to Wood,) on heat production and heat discharge, though the inhibitory nerve apparatus, distinguish in similar manner, though not in equal degree, heat production and heat dissipation; heat production falling decidedly more, as a rule, than does

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heat dissipation. This effect has been proven to be independent of any influence on the circulation, and in all probability the result is produced by nervous system directly upon the chemical movements of the organism.*

The so-called "false antipyretics," increase heat dissipation by acting upon the vaso-motor system and inducing vaso-motor paralysis, of necessity, producing the discharge of animal heat in large volumes. Under this head are classed aconite and veratrum veride, and it is not improbable that in a limited degree, by a similar effect in the vaso-motor apparatus, some of the so called antithermics exert an influence on cutaneous and respiratory discharges of heat.

As a means to control the course of disease, to lessen complications, or to reduce the mortality rate, these remedies have of late fallen into disfavor, and the cold bath has been shown to have great efficacy in reducing the mortality, especially in typhoid fever.

The action of the *cold bath* is to abstract heat and reduce the temperature of the blood circulating in the internal organs; but this is far less important than the reflex stimulus aroused by cold temperature, applied to the peripheral nerves, thus vitalizing the nerve centres.

This reflex stimulus of nerve centres induces an innervation of respiration, circulation, digestion, tissue formation, and excretion, so that the rapid heart is slowed, the hurried respiration are quieted, anorexia gives place to a desire for food, muscular irritability is allayed, and the patient is greatly comforted.

Statistics show wonderful results of the cold bath treatment, especially in the reduced mortality rates of typhoid fever. Brand collected 11,124 cases treated under the expectant plan, with a mortality rate 21.7 per cent., and 19,017 cases treated by all kinds of cold bath treatment without, however, its strict enforcement, with a rate of but 7.8 per cent. mortality. He also obtained from twenty-three

*Wood, *Trans. Am. Assoc. Vol. II.*

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sources, German and French, of undoubted authenticity, reports of 5,573 casss treated by the cold bath, with a mortality rate of 3.9 per cent.

Numerous other authorities might be quoted, showing a mortality under the cold bath treatment of from 6.9 to 1 per cent. where under other treatment the mortality ranged from 23 8 to 32.2 per cent. Brand's method is thus described by Beaumetz. "The bath-tub should be placed near the bed. It should contain a sufficient quantity of water, so that the patient when immersed in it, shall be completely covered up to his neck. The temperature of the water should not exceed 78° F.

Before carrying the patient to the bath-tub, and in order to diminish the trying and painful sensation of cold, the abdomen is rubbed with the water of the bath. Then he is placed in the bath, and all the time that he remains there the head is showered with ice-cold water. It is understood that the hair shall have been previously cut short, in order to render the affusions more active. Brand recommends also to rub the back and belly of the patient during the time of the bath. The patient is kept in the bath about fifteen minutes; in certain cases it may be prolonged to twenty minutes. At the end of this time the patient is taken with shivering and chattering, and is then removed to his bed, his lower limbs are covered with blankets. As for the rest of the body, in summer, only a single sheet is employed, and in winter, a sheet covered with a woolen blanket.

At the end of twenty minutes the temperature is taken, and during the period of comfort which ensues, some nourishment is given. Every hour the temperature is taken anew, and when the mercury resumes its ascending march and reaches 102° to 103°, whether during the day or night, the patient is again plunged into the cold bath.

Brand has fixed about three hours as the interval which should elapse between the baths, but this period may be made much shorter and reduced to two hours, or to one and a half if there is very high fever heat and great resistance to refrigerator. Brand insists also, that in the interval of the

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bath the nurses should keep constantly applied over the abdomen of the patient compresses wet in cold water, and renewed as fast as they become warm.

It is well on the inception, to resort to cold ablutions with towels, (not sponging.) Friction aids heat elimination by dilating the cutaneous vessels, and the shock refreshes the nerve centres. Then the patient grows accustomed to the more energetic bath, which may be opened with the half bath, combined with gentle chafing, and gradually culminate in the full bath at 65° F.

The patient when taking the bath, and at all times should be well supported with such nourishment as is suitable to his condition—milk, wine, broth, peptonoids, etc., no other treatment is employed. Such is Brand's method.

In order that it may give success, it may be applied from the very onset of the fever. In proportion to the tardiness, and lateness of its inception, the chances of success are lessened.

The experiments have been confined almost exclusively to typhoid fever, but I see no reason why the cold bath cannot be used in the treatment of other diseases where pyrexia is a factor with equally good results.

The reasons for not adopting this treatment in this country, are that it runs counter to the popular prejudice, and the method is both expensive and troublesome.

It is not always necessary to give the patient a full bath. The bath can be modified to suit the case. It can be administered as a sponge bath, cold pack, douche, to a full cold bath.

In giving a bath the patient should be passsive and not allowed to exert himself.

Internal antipyretics are very extensively prescribed. There is no doubt that they do reduce temperature, and that in the majority of cases promote the comfort of the patient. But it is clear that they have little effect in shortening the duration of the disease, or in lessening the complications. We now are pretty certain that high temperature is not responsible for the change in the parenchymatous organs, or

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the symptoms of impaired activity of the nervous centres; but rather these conditions are due, to a great extent, to toxic alkaloids. There seems to be no fixed relations between these substances and the pyrexia of the infectious diseases. Where we are able to do nothing more than to treat the symptoms of fever by means of an antipyretic, the results are chiefly a relief of the conditions of fever for a while. We should bear in mind that this relief is often at the expense of depression of the heart, or circulation, or nervous system, often with the result of rendering the convalescence longer or tedious.

With these general remarks, I will now present a summary of the latest views bearing upon the newer antipyretics.

Antipyrin. This substance was discovered by Dr. Knorr, of Munich. It is a grayish powder, of a slightly bitter taste, soluble in water and alcohol. It is prepared by a very complicated process (patented). With sweet spirits of nitre, the solution gradually becomes green and forms beautiful green crystals of a new compound. The sweet spirits of nitre almost always contains free nitrous acid, and, with antipyrin, a greenish solution is formed, iso-nitroso-antipyrin. The result of this is simply to render a certain amount of the antipyrin inert.

Given to animals in moderate toxic doses, antipyrin causes first a cataleptic state, then increased reflex activity, opisthotonos, and convulsions. Larger doses cause complete relaxation, with loss of reflex action and death.

These results seem to be due to an action both on the spinal and cerebral centres, and on the sensory and motor nerves, but the method of action is yet obscure.

In moderate doses, antipyrin increases the arterial pressure, while toxic doses lower the pressure. In sufficient doses, antipyrin paralyzes the heart of the frog. Probably these effects are due to vaso-motor spasm, for this drug acts powerfully as a hæmostatic, acting like ergot.

Large doses produce a livid color of the face, especially of the lips, due to a change of color of the blood-methæthoglo-

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bin. The blood-corpuscles are not destroyed by antipyrin.

Ordinary doses do not affect respiration, but, after toxic doses, it progressively diminishes it. Antipyrin is eliminated by the kidneys. It appears in the urine within half an hour, and continues for thirty-six hours; most of it is eliminated, however, in the first twelve hours.

The temperature is almost always lowered in febrile conditions; the fall begins in about half an hour, and is accompanied with profuse sweating. The depression of temperature usually lasts from two to twenty hours. The pulse rate is reduced, but the force is not diminished. This fall of temperature is probably due to direct action on the heat-centres, and is independent of diaphoresis. Experiments on animals show that the fall of temperature is due to decreased heat-production and decreased heat-dissipation. The decrease of heat-dissipation is probably due to the lessened heat-production, so that the fall of temperature is the result of decreased heat-production.

Antipyrin is recommended in almost all febrile conditions. It has, however, often caused collapse, and should be used with great care. In the hectic fever of phthisis, it causes so much feebleness and depression as to forbid its use. The free use of this drug has caused cyanosis, disturbed respiration and circulation, dyspnœa and sensations of heat over the entire body. A case is reported where it caused a widespread œdema, together with these other symptoms. Not rarely an eruption on the skin occurs, with more or less suffering and constitutional disturbance. Its most typical form consists of small, reddish, irregularly circular spots, resembling somewhat those of measles. On pressure, the red color usually disappears, leaving a brown pigmentation which color comes into view during the fading of the eruption, and generally lasts five or six days. Sometimes the eruption takes the form of an intense erythema, with great swelling of the face, especially about the eyes, violent burning sensations and rise of temperature. Several deaths are reported.

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The antipyretic uses of the drug are at present attracting less attention than its analgesic properties.

The most serious drawback to this drug is its tendency to cause collapse, owing to its ultimate action upon the heart. Antipyrin is a drug which should be used at all times with great caution; and should never be left in the hands of the patient to use at discretion when full doses are ordered. The careless use of this drug for headache should be discountenanced by the profession, as it is now quite customary for women to take "headache powders" in large doses, without medical advice, and to prescribe the same for their friends.

The dose for an adult should not exceed twenty grains; and H. C. Wood advises that the first dose should not exceed ten grains. These doses may be repeated two or three times, at intervals of one or two hours under very rare circumstances.

The condition of the patient, aside from the temperature, should be taken into consideration, and the dose regulated according to the strength of the patient. In diseases which end by crisis, as pneumonia, it is of vital importance that the antipyretic dose does not immediately precede the crisis.

Dr. Cash says: "It is probable that one grain, thrice daily, produces as favorable a defervescence as much larger doses, if given at the right time—that is to say, at the time of tendency to recurrence of pyrexia, or at its remission.

In the pyrexia of phthisis, its antipyretic action is perhaps as reliable as it is in the treatment of any disease.

In renal disease, antipyrin is contra-indicated. It is important that nothing should interfere with its elimination, which is done by the kidneys. Diabetes does not contra-indicate its use.

Acetanilid or Antifebrin.—This is a white crystalline substance, prepared by heating together a mixture of anilin and acetic acid. It is distilled and then purified by successive crystallizations. It is odorless, and causes a slight burning sensation on the tongue. It is soluble only in 189 parts of cold water, but is freely soluble in alcohol, ether, and chloroform.

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The name "antifebrin" is patented, but the name acetanilid is not patented, and means the same thing.

Large doses cause a peculiar discoloration of the blood—by reducing hæmoglobin to methæmoglobin. The red corpuscles become granular, and, in part, dissolved, do not adhere in rouleaux and the serum contains dissolved coloring matter. The amœboid movements of the white corpuscles cease. The continued use of large doses produces fatty degeneration of the heart, liver, and kidneys.

The fall of temperature is due chiefly to reduced heat-production.

In ordinary doses, the heart's action is strengthened, rather than weakened. Large doses depress the heart, and cause collapse.

Cyanosis sometimes occurs, but usually after doses of seven grains or more. It passes off quickly when the drug is discontinued, and is not a serious symptom.

The fall of temperature is energetic in proportion to the height of the fever. The fall of temperature generally begins within an hour, and reaches its maximum in three to four hours. The fall of temperature is usually accompanied by profuse sweating, but less than that of antipyrin. Though comparatively insoluble, acetanilide is readily absorbed.

The indications for its use are the same as for antipyrin. In phthisis, it is a powerful antiseptic, but more liable to cause cyanosis than in any other ailment. The usual sweating in phthisis is often diminished, or avoided altogether, by a dose given in time to prevent the evening rise of temperature. Children bear the remedy well.

The average dose is from four to seven grains. The long-continued use of large doses, in some cases, may cause anæmia, due to the solution of the red blood corpuscles. Single large doses may cause cyanosis, cardiac weakness, and collapse.

The advantages of antifebrin or acetanilid over antipyrin may be summed up as follows: A smaller dose is required; the action is steadier and more continued; less danger of collapse; its after-effects are less depressing; it is rarely

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toxic, and, under the name acetanilid, can be bought in the open market—and it is cheap.

Phenacetin.—This is derived from phenol, and is a white crystalline powder, tasteless, and almost insoluble in water, but easily soluble in hot alcohol, and in warm lactic acid.

Its physiological action on animals has not been studied as yet, but it is probably analogous to that of acetanilid. Very large doses have been given to animals without producing toxic symptoms.

In febrile conditions, it is a reliable antipyretic. The fall of temperature is gradual; begins in half to an hour, and reaches the lowest point in three or four hours; and is then followed by a gradual rise—the influence of a single dose of seven grains lasting from six to ten hours. The fall of temperature is always attended by free perspiration, but very rarely with any gastric disturbances, rash, cyanosis, or collapse.

It has no depressing action on the heart, but seems rather to strengthen its action. The frequency of the pulse and respiration diminishes with the fall of temperature. It has been found useful in all febrile conditions. Seven grains have been given every four hours, and, even when continued for a considerable time, has rarely given rise to accidents. In phthisis, and other asthenic conditions, it may cause a feeling of weakness, and should be used with caution. The usual dose is seven grains. Though safe in comparison with other antipyretics, a few unfavorable results have been reported. Large doses have caused giddiness, flashes of light, trembling of the limbs, and nausea; also a feeling of intense cold, cyanosis, cold perspiration, and dyspnœa.

Pyrodine.—This is a white crystalline substance, tasteless, and sparingly soluble in water. Large amounts depress the heart and lower blood pressure by a direct action on the vaso-motor centre. It has a directly depressing action on the spinal cord, and lowers reflex action. Repeated doses cause jaundice. Doses of eight to twelve grains cause marked reduction of temperature in two to four hours. The temperature remains low for several hours, when a slight rise

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occurs, followed by a second reduction, so that the action of a single dose may last an entire day. The fall of temperature is accompanied with profuse sweating, but no collapse.

It should never be given in larger doses than twelve grains, and only once in eighteen or twenty-four hours, and not continued for more than a few days. If these precautions are neglected, fatal symptoms may be rapidly induced. Doses of three or four grains have been given to children.

Pyrodine appears to be more prompt, powerful, and prolonged in its action than antipyrin, acctanilid, or phenacetine; but it also surpasses them in its ability to produce sudden toxic effects.

Methacetin.—This is the latest antipyretic. It is a slightly reddish powder, slightly bitter to the taste, soluble in warm water, but less so in cold water, and very soluble in alcohol. It is an efficient antipyretic, causing a fall of three to five degrees in a few hours, and frequently profuse perspiration. It may cause collapse. It is very poisonous to rabbits, forty-five grains having produced convulsions and death. Its action seems to be similar to antipyrin.

The superiority of the recent antipyretics has, since their discovery, led to the complete abandonment of salicylic acid and quinine in fevers, except where they exert a specific action.

Kairin, on account of its dangerous, depressing action on the heart, and its destructive action on the blood, has been but little used.

Thallin, although a prompt and powerful antipyretic, has so often produced violent chills, cardiac depression, and gastro-intestinal irritation, that its use has steadily diminished.

Peacock's Bromides in Infantile Convulsions.

Dr. J. J. Johnson, of Davenport, Va., writes that he attended a child, age 14 months, in one of the worst convulsions (due to congestion of the stomach) he ever saw. He gave ten drops of Peacock's Bromides, and the child speedily recovered. He adds: "I cheerfully recommend Peacock's Bromides."

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Art. III.—Typhoid, Typho-Malarial, and Continued Fevers *

By D. E. SMITH, M. D., of Mobile, Ala.

Typhoid Fever is a continued fever, lasting usually about twenty-one days. It commences mildly, and gradually becomes more severe, until the beginning of the third week, when, if the temperature slowly declines with an improved circulation, there is a good prospect for a speedy convalescence. The characteristic lesions chiefly affect the small intestines and mesenteric glands. Peyer's patches tend to ulcerate. On the abdomen and chest, there occur small pink eruptions, about the size of a pin-point or larger, which disappear on pressure. There is also a tendency to diarrhœa, with gaseous distension of intestines. Generally, the tongue and lips are dry; pulmonary trouble is evidenced by a cough and increased bronchial secretion; and if patient is allowed to retain the same position in bed, a tendency to hypostatic pneumonia.

The *causes* are as yet unknown, but the disease is believed to be due to a specific poison introduced from without—either impure air or water. There is reason to believe that the latter is the far more prolific cause. The poisoning of the water may be so slight as to render it almost incredible that the disease should be propagated by it; yet an immense mass of evidence goes to prove that fearful epidemics of this disease have been occasioned by it.

I do not think that poisonous gases can be regarded as a cause of typhoid fever to any great extent. Poisons introduced by the way of the stomach are carried there in larger bulk, and are very probably acted upon by the stomach juices, rendered more easy of absorption and enter the blood in larger quantity. It has never been *demonstrated* that any particular gaseous body can induce this disease. There are, however, both mineral and vegetable substances which, when introduced into the stomach, produce symptoms and morbid changes difficult to distinguish from those of enteric fever.

* Read before Mobile County Medical Society.

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The diseases which are produced by the specific poison of typhoid fever differ a good deal. Some of them are so serious that life is almost inevitably destroyed; others are so trifling that a doubt exists whether there was any disease at all. Between these extremes we find every gradation, with manifold modifications and combinations. Some cases, at first trifling, will terminate fatally; other cases begin severely, and yet go on lightly. So long as the classification of disease was chiefly based on the symptoms, it was impossible to recognize the relationship between these manifold forms of disease. The lightest cases are often called, not typhoid fever, but *gastric fever, abdominal catarrh*, or simple continued fever.

Symptomatology.—Among all the symptoms of typhoid fever, the febrile movement is the one which most attracts attention, and is the most important in determining the disease. The febrile movement has a typical course. In the well-marked simple cases, the duration of the fever is from three to four weeks. In the first week, there is a gradual increase of the body temperature. In the second week, the fever is continuous, with an increase of one or two degrees during the evening over the morning. In the third week, the varying morning and evening temperature is increased with a diminution of fever in both.

The *anatomical lesions* of typhoid fever are principally the parenchymatous degeneration of different organs. These parenchymatous changes do not occur in typhoid fever alone, nor are they in any way characteristic of it. They are found constantly in all diseases in which the temperature reaches a sufficient degree and duration. They are absent or trivial in all cases of typhoid fever in which the increase of temperature is small. In the *liver*, the cells become more granular. In the higher degrees of degeneration, the cells lose their short contour; they appear like a conglomeration of granules, and finally they lose all cohesion and break down into a formless mass of granulated detritus. Even in moderate degrees of degeneration, the scanty amount of blood in the small vessels and the uniform color

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of the section in which the acini can hardly be recognized, strike the naked eye. In advanced degeneration, the color varies from a grayish red to an orange or yellow. The extent of these lesions depends principally upon the height and duration of the high temperature. The secretion of bile is often markedly diminished. Its character is changed, often becoming very thin and quite colorless. The *kidneys* also undergo parenchymatous degeneration in the same way as the liver; and, like the changes of that organ, are more evident and decided in proportion to the degree and duration of the fever. The muscular tissue of the heart also undergoes degeneration, and a knowledge of this change is very important in the treatment of this disease. The *heart* may become soft, flaccid, and very weak, in the impulse. The disturbance of the heart's functions may go on to complete paralysis. The *muscles of the whole body* also undergo a change—similar to, though not to the extent of, some other fevers, especially yellow fever.

At the beginning of convalescence, when the mental faculties have been restored to their normal condition, the excessive loss of power of which the patients complain depends essentially on this change in the muscles. The hæmorrhages, ulcerations, and ruptures, are the results of this muscular degeneration.

Marked disturbances in the functions of the central nervous system, which constitute such a prominent part of the lesions in severe typhoid fever, and which are marked symptoms of this disease, are due, in great part, to some form of *degeneration of the brain substance*, and are, as a rule, also in proportion to the height and duration of the fever.

I might go on enumerating the glands, pancreas, spleen, and lymphatics, and their changes, but these may all be found mentioned in the standard works; but they may be dismissed with the simple observation that they also undergo changes in proportion to the duration and height of the fever.

Diagnosis.—There is not a single symptom belonging to typhoid fever which can be considered as pathognomonic.

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The safest protection against error in each case is to make a thorough examination and observation of the disease. The point of greatest importance is the course of the disease—the slow beginning of the prodromic stage, the gradual increase of the fever, its long duration as a continued fever, and, finally, its slow decrease, and often a remittent form. To make our diagnosis sure, we must exclude all other diseases which present a similar combination of symptoms.

An *acute miliary tuberculosis* is very often mistaken for typhoid fever, and, in fact, I have, in past years, made this mistake oftentimes. *Acute tubercular meningitis* bears strong and strikingly similar symptoms to typhoid fever. It is possible also to confound the disease with *malarial fevers puerperal fever, pyæmia, pericarditis, endocarditis, pleuritis, uræmia.* To remember that it is possible to make such mistakes, is about the surest way to avoid them. During an extensive epidemic, we would be more disposed to diagnose typhoid fever than during a time when there were no other cases. Furthermore, age has a bearing on our diagnosis. Old men and young children are not so much disposed to take it.

Typho-Malarial Fever is a fever with a new name that has been in existence for many years; and typho-malarial is the name given by the late Dr. Woodward, of the United States Army, as denoting a disease in which both malarial and typhoid fever poisons were present at the same time—each influencing the symptoms of the other. At the meeting of the Alabama State Medical Association, 1888, I heard quite a lengthy discussion on this subject, and the majority of those members who spoke on the subject were of the opinion that there is met with in practice throughout the State a form of fever quite different from the usual typhoid and malarial fever cases, and to these cases the name of typho-malarial was given. Dr. Baldridge, of Huntsville, said the symptoms were similar to typhoid fever in many respects, but differing in others. He said the period of invasion was of shorter duration, and the development more abrupt; the pulse much slower, according to temperature, than in most

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febrile diseases, seldom exceeding 110. The tongue is usually large, moist, and covered with a white coat. Diarrhœa usually absent; bilious vomiting a frequent symptom; and skin not uniformly dry, as in typhoid fever; but soft and moist, with occasional periods of profuse perspiration. Tympanites is sometimes absent, but never occurs to any great extent. No eruption is found on the body similar to the petechial spots of typhoid fever. Hæmorrhage from bowels is seldom, and epistaxis is very rare. Temperature presents a tolerably uniform course, but the variations between the morning and evening temperature is greater. The duration of this fever is generally longer than typhoid fever—more often six than three weeks.

These symptoms, as given by Dr Baldridge, were not contradicted by other members, but there were many who thought that these symptoms could be ascribed to cases of pure typhoid fever. The Drs. Davis, of Birmingham, Ala., during the same session related the history of a *post-mortem* examination made on the body of a man who had died of this disease; and as the subject of typho-malarial fever had been often discussed in the Jefferson County Medical Society, it was hoped that the pathological changes observed would decide the nature of this disease. Dr. W. E. B. Davis found all the pathognomonic changes due to cases of typhoid fever, and Dr. J. D. S. Davis found all the changes due to malarial fever. The one brother believed these cases to be of malarial origin and changed by the influence of typhoid fever. The other believed the case to have been typhoid fever modified or influenced in its course by malaria.

It is the opinion of many physicians, including myself, that if we are treating a case of fever in which there is a doubt in the diagnosis, as regards typhoid and malarial fever, we should treat the case as one due to malaria. Should our treatment fail to break the fever, then we should treat it as a case of typhoid fever.

The treatments of this disease have been very varied. Some advocate the treatment by means of large purgative doses of calomel and vegetable cathartics first, to be followed by

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large doses of quinine. The quinine is recommended to be given when the fever is highest, on the plan that Leibermeister administered it. In this fever, as well as typhoid fever, large doses of quinine act as a sedative, and are perfectly safe in the beginning of the fever or before the nervous system has been exhausted. No less than fifteen grains, nor more than thirty grains, should, in my opinion, be given, though much larger doses than thirty grains have been administered. Should this treatment fail to break the fever, then the expectant plan of treatment is recommended—treating the patient with an eye to his strength being kept up, and his symptoms treated as they may occur. Vegetable and mineral acids are recommended; so are sour wines. Butter-milk is given in preference to sweet milk. Antipyrin may be tried; but it should be given with the view of reducing temperature.

Tincture of gelsemium was recommended by Dr. Huggins, of Newberne, Ala. He gives antipyrin until the temperature is reduced; then stops it and gives the fluid extract of gelsemium, five to six drops every four hours, and succeeds in keeping down thereby the fever. Dr. Huggins relieved insomnia and restlessness by potassium bromide, chloral, and hyoscyamus.

Dr. Morton, of Vernor, found quinine to prolong the fever. He used nitric and muriatic acids internally, and relied upon sponging the body with hot or cold water, as may be the most agreeable to the patient.

The *diet* should consist of roasted or baked apples, apple-cider, and butter-milk. He reports a large number treated, and no deaths.

I have used the mixture of iodine and carbolic acid for the purpose of controlling the bilious vomiting, which oftentimes is a very distressing symptom, and have found it of great benefit.

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ART. IV.—Feeding in the Wasting Diseases.*

By EPHRAIM CUTTER, A. M., LL. D., M. D.,

(HARVARD, 1856, AND UNIVERSITY OF PENNSYLVANIA, 1857.)

AUTHOR OF BOYLSTON PRIZE ESSAY FOR 1857, ON "UNDER WHAT CIRCUMSTANCES DO THE USUAL SIGNS FURNISHED BY AUSCULTATION AND PERCUSSION PROVE FALLACIOUS?"; CORRESPONDING MEMBER OF THE BELGIAN AND ITALIAN MICROSCOPICAL SOCIETIES; HONORARY FELLOW OF THE SOCIETY OF SCIENCE, LETTERS AND ART, LONDON; PRINCIPAL OF MEDICAL DEPARTMENT OF INSTRUCTION OF THE AMERICAN INSTITUTE OF MICROLOGY, ETC., ETC.

And JOHN ASHBURTON CUTTER, M. D., B. Sc., of New York City.

FIRST SECTION.—Tuberculosis Pulmonalis, one hundred cases.

SECOND SECTION.—The Fatty and Fibroid Degenerations, fifty cases.

THIRD SECTION.—Male Neurasthenia, fifty cases.

First Section.—Statistics of one hundred cases of consumption treated by food plans to be hereafter described.

Resumé.—Series I. Non-arrests, twenty-one cases.

(*a.*) Cases that were not improved, nine.

(*b.*) Cases that were on partial diet, or were too irresolute, or had bad surroundings, financial, climatic, etc., twelve.

Series II. Partial arrests, thirty-nine cases.

(*a.*) Cases that followed the treatment faithfully, nineteen.

(*b.*) Cases that did not follow the treatment faithfully, nine.

(*c.*) Cases that had bad surroundings, that died of pneumonia, etc., eleven.

Series III. Permanent arrests, forty cases.

(*a.*) Tuberculosis, thirty-two cases.

(*b.*) Pretuberculosis, eight cases.

In 1880 the senior writer presented to the American Medical Association an article entitled, "The Salisbury Plans in Consumption," with the full text of seventy cases. To-day we come before you, not to laud or condemn Dr. Salisbury, but to simply give you in the concrete what has been brought before us in our daily work with consumption of the lungs, as we have attacked the disease, believing it to be first and last a food disease, climate and other causes being entirely sec-

* This is a full Abstract of a Report presented to the Committee of Dietetics of the American Medical Association at its Forty-First Annual Meeting in Nashville, Tenn., May, 1890.

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ondary; and, therefore, this contribution will be of the more value to this committee of dietetics.

Series I. Non-arrests, twenty-one cases.

(*a.*) *Cases that were not improved, nine.*

1. *Illustrative Case.*—(*See Transactions American Medical Association*, 1880, pp. 333-408, case 7.) August 28, 1877. M. H. S., fisherman, Lanesville, (Cape Ann, Mass.,) aged 33 years. Father died of phthisis. Mother living, been sick two months. He states that he took cold and went out fishing. Was exposed and took more cold; except two attacks of typhoid fever, was perfectly well before. General appearance, bad. Cough is constant and severe. No hæmoptysis. No dyspnœa, except on going up stairs. Severe pain in shoulders. Appetite poor. Bowels regular. Has lost flesh and strength. Night-sweats copious. Pulse weak. Hands shake badly.

Physical Signs.—Dullness on percussion and crackling over right upper third front, and lower third back; feeble inspiration, almost flat on percussion; no crackling, but the respiratory murmur was heard underneath. Inspection of the blood revealed spores and spore collects in abundance. Fibrin and mycelial filaments. Red corpuscles, adhesive, sticky, irregularly massed, pale in color. Mr. S. went upon the treatment with quinine. It was his intention to come up from the Cape again, but he was unable to do so, and, despite the means used, he died not long after.

Remarks.—At that time it did not seem to the writer that his case was hopeless. Still, his history teaches that one must not trust too much to first appearances. It is a disadvantage to see a patient only once. It was reported that he faithfully used the diet. It is well, however, to compare the case with some of the very sick ones that were cured, as noted in Series III; the lesson taught is simply that the physician should never refuse to take a case, and should never be too free in his promises of recovery.

(*b.*) Cases that were on partial diet; were too irresolute; had bad surroundings, financial, climatic, etc., twelve.

Illustrative.—(See case 1, Loc. cit.) Widow, aged 43 years, small sized, thin, anxious and nervous. Asthmatic complication, old abscesses of the mediastinum, diarrhœa, dyspepsia, sleeplessness, severe cough, dullness on percussion, with constant crepitant râles over both upper thirds front. Great dyspnœa at times. Abnormal valvular sounds of the heart.

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No albumen in urine. Altogether, the most distressed and suffering case of consumption I had seen for some time. The effect of the animal diet, baths of mineral acids and quinine, was to relieve, in a measure, the night sweats and abdominal pains; but the appetite turned against the animal food and it would often be rejected by vomiting. She was obliged, then, to carry out the regimé only partially, particularly as she laid all her bad feelings, distresses and sickness, to her food or medicine, and never to her disease. She suffered, also, greatly from prolapsus of the uterus, aggravated by the severe coughing.

This case was not relieved by the special treatment recommended. The weakness of mind and body, induced by the presence of organic disease in the thoracic and abdominal viscera, was too great to be reached by, perhaps, any treatment. Indeed, just here it may be stated that no pretension is made toward cure of any but one-third of the cases.

Note.—This was 1880; now we think that more can be cured, (see table,) but to insure that proportion it is necessary to have the treatment strictly carried out.

The present case was one in which there was really no hope, and only adopted as "A drowning man catches at a straw." It is thought best here to give simply the bad and good cases together, and let the reader judge for himself of the value of the data thus derived.

Series II. Partial arrests, thirty-nine cases.

(*a.*) *Cases that followed the treatment faithfully, nineteen.*

Illustrative Case.—(See No. 21, Loc. cit.) Mr. W., aged 60, in 1874, had been consumptive for two years; his occupation was that of an overseer of an umber paint mill. He had, with a cough, marks of increasing debility, as loss of flesh, animation and courage. There were marked dullness on percussion, crepitant and sonorous râles over the upper part of both lungs; the blood also presented fibrin filaments and spores; it is some years since he has lived upon animal food diet; his wife has faithfully prepared the choicest meats for him, and, what is more, has encouraged him in pursuing the uncommon diet. The case was rather unpromising at first, owing to its long standing and extent of tubercle infiltration. He is, however, (1876,) comparatively well. Cough is hardly perceptible. The physical signs are still to be detected, but with less marked characteristics. He attends to his business as usual. Says he expected to die, in which ex-

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pectation the community shared. The blood shows great diminution in the foreign admixtures. 1879, still living, but very feeble. In October he died.

(*b.*) *Cases that did not follow the treatment faithfully, nine.*

Illustrative Case—(See case 23, Loc. cit.) Miss C., aged 22, residence, Cape Cod. Seen July, 1875; amenorrhœa, cardiac trouble, dullness on percussion in upper part of both lungs, expiratory râles in same location. Blood was full of evidence of disease, as shown by the enlarged white corpuscles, the spores and fibrin filaments; she had been under the hypophosphites of lime and soda. She was put upon the strict diet and mineral acid baths, and was removed to New Hampshire She was thin in flesh and unable to walk an eighth of a mile from prostration under the necessary effort. For the next three months, she was not thoroughly convinced of the utility of the measures now proposed; still her friends were, and by means of their influence she adhered closely to diet and baths. Immediately there was an improvement in the cough, in flesh and strength, which continued. She walked two miles readily. Returned home for a visit in November. Here the diet was abandoned; ate everything she liked, and took medicines. Remained at home four weeks. She ran rapidly down, lingering till she felt "she could not live two days." Returning to New Hampshire, she improved but little. Remained there till April, 1876, when, being very much worse, she returned home to die. Died in 1878.

This case shows the power of the system to resist the disease, even when not following up the treatment; this resistance ought to be more relied on.

(*c.*) *Cases that had bad surroundings; that died of pneumonia, etc, eleven cases.*

Illustrative Case—(See case 27, Loc. cit.) "In October, 1874, Mrs. ———, a woman with a very young child, that especially cried by night and kept its mother awake, was very pale and thin, coughing severely and raising largely. There was diminished resonance on percussion and crackling throughout the upper third of right lung. She adopted the diet and acid baths. In four months the cough was very slight. The physical signs diminished. Her softened lung tissue dried up. The appearance improved so much that a casual observer would have called her well. All the time she suckled her infant. Owing to the hard times, she was obliged to relinquish her diet and would not accept it as a gift. Im-

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mediately she began to fail, and died in the course of six months. The improvement in health kept pace exactly with the imposed diet. When she ate bread the cough returned; the expectoration was copious. The night sweats reappeared. This shows markedly the relation of animal food to consumption. It is well worth knowing, for if these things 'are done in the green tree, what may be done in the dry?'"

Series III. Arrests more permanent in character, and might be termed cures if occurring in other diseases.

(*a.*) Tubercular, thirty-two. (*b.*) Pretubercular, eight.

Illustrative Case.—(See case No. 53, Loc. cit.) Mrs. Wall, Cleveland, Ohio, June 21, 1877. Present condition, suckling a four month's child; active and doing her own housework; looks like a person in ordinary health; coughs occasionally; no sputa; a good sized, rather flat-chested woman, 35 years of age. *Chest.*—Dullness on percussion and cavernous respiration over left upper third back; dullness over the whole left back; elsewhere, normal. *Blood.*—Inspection showed normal looking blood. Red corpuscles not massed, are distinct, well defined, rouleauxed, no fibrin or mycelial filaments; white corpuscles enlarged.

This report is more interesting when taken in connection with the following history:

In February, 1865, Mrs. Wall had been sick in bed four months with the last stages of consumption. She was emaciated to a skeleton; weight, 60 pounds; usual weight, 130 pounds. Her physicians, who were regularly educated and skillful men, pronounced her left lung "gone"—that is, riddled with tubercles that had softened and broken down in such a manner that the pulmonary substance was removed; had become useless, and, of course, they gave a decidedly fatal prognosis. There was at this time a great caving in or flattening of the antero-posterior diameter of the chest, due to atmospheric pressure, conjoined with loss of lung substance. At this time she came under Dr. Salisbury's care. The patient's mother caused the treatment to be faithfully and assiduously followed out. Improvement slowly followed. In four months' time she was able to be out of doors and visit the city. After a time she resumed her profession as school teacher and taught successfully for four years. Five years ago she married and has borne three children, all healthy and vigorous. She likes her meat diet best, lives on it and works hard. The physical signs adduced show the mark of the ruin wrought in her lung, and also show the

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tremendous power of food in managing or in affecting the course of organic pulmonary disease, even in its third and hopeless stage. This history reads like fiction.

In November, 1888, we heard from her that she had continued in good health. A beef eater.

Illustrative case. Unpublished.

1884. Young man; cavities in both lungs; heart enlarged; emaciated as badly as preceding case; profuse hæmoptyses; elastic and inelastic lung fibres in sputa; blood tubercular; was treated very carefully on these plans; was cured, *i. e.*, his cough ceased; the lungs healed; the heart regained its normal size; he took on flesh and strength; went through Yale College; was graduated with honors; is well and was seen by us December, 1889.

Preturbercular cases treated that may come under this head.

Illustrative Case.—(See case 65, Loc. cit.) In April, 1876, a young man, 18 years and 6 months, complained of feeling weak and listless. He had nocturnal and morning cough, with slight expectoration. He was pale, thin and losing flesh. Consumption was hereditary in both sides of the family. There were no physical signs of pulmonic lesion. Inspection of the blood, microscopically, disclosed abundant signs of mischief, such as:

Fibrin filaments were marked in character, spores and spore collections, fibrin filaments, white corpuscles much enlarged and too numerous; corpuscles thin, flabby, pale, sticky; outlines not cleanly cut—aggregated. These, taken together with the history and the rational signs, induced a diagnosis of the pretubercular stage. Under the use of acid baths and strict diet, the sanguineous and other signs began to disappear, so that in a year he was enabled to proceed to Germany and study music. Has been a beef eater, *i. e.*, eats more of it than people usually do; alive and well, 1890.

Rationale.—1. Tuberculosis is a systemic and not a local disease, primarily.

2. Tuberculosis is a diseased condition or state due to the presence of a yeast in the blood with its fermentative products.

3. The yeast is introduced into the blood through the alimentary canal from starch and sugar in excess, and in a state of fermentation.

4. The physical micrographical conditions found in the

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blood of tubercular cases constitute the peculiar morphology so often alluded to. The main features are as follows:

(*a.*) Spores of vinegar yeasts.

(*b.*) Spore collects.

(*c.*) Fibrin filaments unusually large and prominent.

(*d.*) Enlarged massal white corpuscles. This enlargement, proceeding from the white corpuscles, being unusually fertile niduses of the vegetation, called entophytal, similar examples of which abound in algæ.

(*e.*) Deprivation of the red discs of their coating of neurine, thus rendering them sticky, adhesive, and singularly inclined to aggregate themselves in confused masses. At the same time they lose their color, their clean cut outlines, and are diminished in number relatively and absolutely.

(*f.*) Thrombi formed of the fibrin filaments; of the corpuscles; of the spore collects.

(*g.*) All of the foregoing have been photographed with Tolles' objectives, from the one-fourth to his one seventy-fifth.

5. The vegetation may exist in a latent state.

6. It may be transmitted from parent to child in the milk, but the greater point of interest is in the tuberculous diathesis, produced by the same feeding in families for generations.

7. The morphology of the blood is commonly present some time during one year before organic disease. In other words, there is a new physical sign of the pretubercular state. The senior writer has a monograph on that subject alone, illustrated with many micro-photographs.

8. Food, then, is the agent of tremendous power that causes tuberculosis.

9. The treatment is based on the idea of removing the cause by ridding the blood of the presence of the yeast and its fermentative products by a process of starvation.

10. Tubercle is a secondary product, a result from embolism, caused by the minute thrombi of fibrin filaments; of the massal corpuscles and of the spore collects, and also from mechanical and chemical effects of the embolism on the nutrition.

11. The breaking down of the tissues comes from a necrosis,

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caused by this overloading of them with the products of fermentation.

12. The yeast is also found in the alimentary canal, on the skin, in the sputum, etc.

13. Flour has been raised into bread by the dejecta of third-stage consumptives.

14. The progress of the case is best watched and studied in the morphology of the blood. The spores are diminished, the filaments removed. The enlarged massal white corpuscles are reduced in size to normal proportions; the red discs acquire their normal color-covering and clean outlines; the fibrin filaments are hardly visible. Thus the red discs dispose themselves in the normal manner, the more perfectly as the cure proceeds. Any deviation in the regimen is indicated by the increase of the abnormal morphological elements in the blood. As the blood improves, usually the general symptoms improve, *pari passu*. We have often witnessed, under treatment, the disappearance of râles of all kinds, night sweats, emaciation, the reduction of the heart to normal size and frequency of beats, simply because of taking away the load it had to carry when the blood was filled with emboli, and was ropy and sticky.

15. This diagnosis by blood examinations does not exclude ordinary physical explorations; it supplements them; we find that the ordinary idea of this diagnosis in the profession is that hæmology is like urinology, and all that is necessary is to take specimens of blood, just as we do urine, and base all our diagnoses of tuberculosis on such examinations. The very suggestion of this demonstrates how far the proposer is from having a true idea of the subject; the evidence must be collected with the least possible interval of time between the removal of the blood from its stream to the stage of the microscope; the capillary circulation is to be used, not the venus or the arterial; take blood from the radial or ulnar side of the forearm by slight puncture with scarificator or scalpel; do not prick the end of the finger; the student must study the morphology of the skin, as well as that of the blood.

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16. There are other diseases in which the normal blood morphology is changed, to wit: rheumatism, cystinæmia, syphilis, ague, etc.

17. This rationale explains the cough, where it is not due to local irritation in the air-passages, such as hyperæmia, ulcers, infiltrations, reflex irritations, to the presence of carbonic acid gas in excess; sometimes it is wonderful how diminishing the fermentation does away with the cough.

18. This rationale explains hæmorrhages as the result of local action of the vegetation on the glue tissues, the connective tissues being softened, disintegrated and broken down by the products of fermentative changes.

19. It explains the night sweats as due to the interstitial necrosis of tissues, thus throwing more work on the skin, hence the injunction to take good care of the skin, and help the lungs while they are being healed.

20. The emaciation and loss of flesh and strength are only the results of the great tissue destruction going on.

21. The sputum must be studied for long fibers, for the various crystals that are found in asthmatic conditions, and also the gravel, granular and encysted.

22. Old-fashioned or fibrous consumption is due to holding of the yeast products in the stomach, to the gradual paralysis of the lungs, with the consequent hyperplasia of the connective tissues, and to the deposit of gravel in this hyperplasia of the fibrous tissues; in this condition the blood morphology is not so much altered; the diagnosis must be made on general grounds; the treatment is practically the same, however.

23. The condition of the liver and kidneys can be determined by watching the urine; it should be tested at least twice a week, and kept at a specific gravity of 1015 to 1020, free from bile, odor or deposit.

24. Physiologists say that man cannot live on beef alone; the chemist says that beef contains all of the elements found in the tissues of the human body. We say, that in cases of consumption, Bright's disease, uterine fibroids, etc., where the special case has indicated a rigid diet of beef, such a

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dietary has been ordered and some of the patients have lived on it alone for four years; thus the dictum of the physiologist is upset.

25. It has been sneeringly said that all that was needed, if the ideas here given as to consumption are true, is that a man prescribe beef and hot water; yet the senior writer had his son study the general sciences four years, medicine four more, and special cases three more years, before he was willing to leave his practice in his care; the art of treating chronic disease, even by positive food plans and judicious medication, is an extremely hard one to acquire.

26. Air is food. Yet consumptives have been cured in the rawest and dampest climates, and so many times that we must go behind the old idea that climate was the only cause of consumption. Granted that bad climate helps to cause the disease, and so, also, will worry, trouble, grief assist towards death; the sending of patients away from home comforts to die elsewhere is not the thing to be advised. If home comforts, good air and the proper food can be combined, by all means do it. This is written with the knowledge that pulmonary disease has been arrested by climate. But our aim is to cure the cases wherever they are, because many cannot afford to change their climate or to live the remainder of their lives in the Adirondacks or Colorado.

27. Remove from the atmosphere of the patient all doubters, sneerers, and those that argue, but never cure; agnostics and nihilists, not content with helping no one, they will endeavor to pull down your work. More permanent arrests could have been secured of these one hundred cases if the patients had been left alone.

28. While encouraging the patient, at all times and in all emergencies, give him to understand what he is fighting; that he must not waste his nerve forces by needless thought and worry, but to hold on persistently and wait for nature to do the work. Each case is a law unto itself; this can be seen by the study of the cases herein recorded; we are finite; death is certain; no man will ever cure 100 per cent. of his cases—may we say of any disease?

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29. If all will take hold firmly, at least 50 per cent. of tubercular cases can be cured, judging from our own clinical experience. Now that consumption is called a curable disease, the great load is lifted off and much more will be accomplished.

30. All cases of pre-tuberculosis ought to be cured, because here is a condition where there has been no destruction of tissue; this is where the exception to section 28 comes in, if the practitioner will diagnosticate the condition, treat scientifically, and the patient obey orders.

31. All physicians who say these plans are foolishness, and who treat their cases by morphine, maltine and whiskey, we ask for publication of cases and the percentage of cures.

32. The diagnosis of pre-tuberculosis by blood examination often negatively points out the seat of trouble to be in the heart or uterus, or perhaps some other organ; also, cases of uterine disease, complicated with tuberculosis, should not be allowed to go untreated, but, in making examination, the physician must go over the whole field and find out all of the disease. Some of the cases in this series, years ago, would have been benefited if their uterine disease had been treated; granted the cause is systemic, for bad food is an etiological factor of uterine diseases, while treating systemically, use all of the modern means to attack the local pelvic troubles.

33. If men complain and say this dietary is too rigid, we will only reply that the cases have demanded it, and will be very thankful when consumption can be cured by more pleasant means than we have employed.

34. Lastly as to Koch: In 1876, all of the morphology of consumptive blood was photographed with Tolles' objectives, to the highest power, his one-seventy-fifth; these microphotographs have been exhibited here and abroad and we find none that equal them; this is written advisedly.

Bacteriology is but an extremely small portion of the micrological world; such algologists and phytologists as Prof. Paulus F. Reinsch, of Ehlangen, and Dr. Fr. Ecklund, physician of the first-class of the Royal Navy, Sweden, endorse this work as covering a much larger field than

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bacteriology does. If the proof was to be placed entirely on the results, then bacteriology must hold its head in shame, as no cures have been effected by it; but we are willing to controvert Koch on scientific grounds and maintain the position that he has told but one-half the story; that botanists have been fighting for years as to whether bacteria were simply babies of the fuller-fledged vegetations; that the bacillus was photographed in 1876; that the ability to diagnosticate pre-tuberculosis and tuberculosis by blood examinations, and the means thus afforded of watching the cases, are worth immeasurably more than the diagnosis of consumption when the disease is apparent to all.

[*Note.*—We are ready to demonstrate the relations of bactaria to alcoholic and acetic acid yeasts by microphotographs.]

[TO BE CONTINUED.]

ART. V.—Pirogoff's Amputation; with a Report of Three Cases.*

By W. B. ROGERS, M. D., of Memphis, Tenn.,

CHIEF SURGEON OF THE LOUISVILLE, NEW ORLEANS AND TEXAS RAILROAD; KANSAS CITY, MEMPHIS AND BIRMINGHAM RAILROAD; DIVISION SURGEON TO THE K. C. F. S. & M. RAILWAY; ILLINOIS CENTRAL RAILWAY; AND MISSOURI PACIFIC RAILWAY.

In presenting this subject with my limited experience, I know that I am leading many of my hearers over well-worn ground. The subject has been written and rewritten times innumerable by abler pens than mine. Nor is it my intention to present any new step or modification in the operation. I simply desire to place the subject of Pirogoff's amputation before this assembly for discussion as to its practical value. To do this, I beg leave to report three cases:

Case I.—On September 10th, 1887, H. N. Leonard, 22 years of age, attempted to board a coach of one of our dummy lines, fell, and the *slowly revolving* wheel of a coach

* Reported before the National Association of Railway Surgeons at Kansas City, Mo., May 2nd, 1890.

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passed across the left foot just in advance of the medio-tarsal articulation, producing a compound crushed fracture of the metatarsal bones, as well as the anterior row of the tarsus. The day following the accident I performed Pirogoff's amputation. A drain-tube of one-fourth of an inch calibre was passed between the tendo-Achilles and the approximated os calcis and tibia, one end of the tube protruding at the inner angle of the wound, the other escaping through an opening, behind and below the lower end of the fibula. The wound was closed with silk gut suture, which included all the soft tissues, between the bone and skin, on both lips of the closed wound.

The tendo-Achilles was next subcutaneously severed, and after the usual dressings were applied, I placed the os calcis in a splint formed from a tin-dipper, the bowl of which was perforated numerously, while the handle, about ten inches long, was placed perpendicularly to the bowl—another handle was soldered to the opposite side of the bowl—thus the two handles passed, one up each side of the leg, and were there secured by plaster of Paris bandages. In this way I secured perfect immobility to the remains of the os calcis—closely held against the tibia. Drainage was perfect—only two dressings were required within the first week—the second one for the purpose of receiving the drain-tube, when a serous discharge, very scant, lasted but ten days. The patient was on his crutches on the eighteenth day, and soon left for his Northern home. Ten months later, a letter informed me that he could climb ladders as easily as before the accident, and that his stump only ached a little after a hard day's work. He was a paper-hanger by trade.

Case II.—Charles Lawborn, 31 years of age, colored brakesman on the Louisville, New Orleans & Texas Railway, was injured at Clarksdale, one hundred miles below Memphis, by the passing of a *slowly revolving* wheel of an empty freight car across his right instep, producing a compound crushed wound, with fracture of various tarsal and metatarsal bones. He arrived at Memphis the following day, February 7, 1889. Amputation was clearly indicated, but the worry of the trip, as well as the shock of the accident, were apparent; and being an advocate of secondary amputations, in preference to primary ones, I delayed operative interference until the next morning, when I performed Pirogoff's amputation. The same means of drainage, method of closing of wound, dressings and splints were used, in this case, as described in Case I. I was less fortunate, doubtless due to the unsanitary sur-

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roundings of his home, in this case, than in Case I—inasmuch as suppuration followed and was quite profuse.

The "laudable ooze" was daily syringed through my drain-tube, and all ended well. The patient has an excellent stump, is now employed by same road, and says he experiences no pain nor tenderness nor ache anywhere in his limb—even after long walks—and he gets over ground with about as much ease as does the average man.

Case III.—In May, 1885, Frank Crosby, 19 years of age, switchman on M. & T. Ry., was run over by front wheels of locomotive—the left leg crushed at the middle, the right foot being crushed at the instep. The shock was so great that amputation was strongly contra-indicated, and it was only on the third day that his pulse warranted an operation. Ether was given, and my brother, Dr. S. A. Rogers, performed a flap amputation, at upper third of left leg, while I performed Piregoff's operation on the right extremity. I made no provision for drainage, nor did I sever the tendo-Achilles. The patient rallied very slowly after the operations, and it was only after a tedious ten weeks, that he was able to be moved to his home in a distant city. The union between the oscalcis and tibia was by granulation. I was not able to learn anything of him after he left me, and as the parts had at that time barely cicatrized, I am unable to say anything of the usefulness or the contrary of this right limb.

Each of you, I dare say, left the walls of his Alma Mater dreaming of his name becoming famous at no distant day by reason of a successful ligation of the R. subclavian artery. Or else following in the footsteps of the renowned French surgeon, you would boldly explore the cranial cavity and evacuate an abscess deep in the brain of some unfortunate. Or possibly, you would cast a shadow that would dwarf the glory of a Spencer Wells, or a Lawson Tait. I, for one, confess to such treasonable ambitions, and I recall it also, that so humble an operation as Pirogoff's was not beyond my greed. The Professor of Surgery where I was first taught, presented a photo of a successful Pirogoff's—and so pictured the rarity of success, as to pronounce a success a surgical rarity.

A few days later, I recognized the possessor of the successful Pirogoff stump, hopping about on crutches, unable

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to use the stump, though it was quite eight years of age. Thus was I still more strongly impressed with the idea that it was a rare feat to score a good stump in this operation. Such teaching should doubtless have led me to avoid the operation; but not so, a minor degree of longing after the impossible, made me keep an eye for an opportunity to operate. Such I say, was my first impressions of the inutility of the practice; and such, I dare say, is the feeling implanted in the minds of many by College Professors as well as by the old text-books. It is the duty then of you, my hearers, the practical surgeons of to-day, to refute this old idea, that a successful Pirogoff's is a "surgical curiosity," if you can.

I present the question, Is Pirogoff's amputation justifiable? I present the question not prepared on a limited experience, either to defend or oppose the procedure, but with a view of eliciting a full and free expression of the opinion, and counting of expression of other men of longer years experience in R. R. surgery; for it is, for the most part, a question of concern to R. R. surgeons. The question of the utility of the stump in after life is the main one, and we, anyone of us, may have the very subject before us for treatment any day.

It is not a question of choice in the various modifications of Pirogoff's amputation, but of the usefulness of the stump in any of these that I wish to be brought before the members for discussion.

ART. VI.—**The Advantages of Using an Organized Chalybeate where Iron is Indicated. Un Fer Physiologique.** (EXTRAITS DU SANG FRAIS.)

Since the investigations of Prof. Bouissingault determined the existence of iron in the blood, and the importance of this element in the process of nutrition, the interesting observations of such authorities as Paul Bert, Regnard, Vinay and others, have shown that *hæmoglobin* is the principal and most characteristic constituent of the red corpuscles of the blood of man and other vertebrate beings. It

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performs the essentially vital function—in the processes of circulation and respiration—of bearing the waste gases of the organism (especially carbon di-oxide) to the lungs and exchanging them for oxygen, which it then bears to the various tissues and organs of the body. It is at the same time the bearer of the *color* of the blood, containing, as it does, *all the iron* present in the blood.

All symptoms of chlorosis depend upon disordered blood-formation. It is an essential anæmia, in which the chief clinical and pathological features are a great diminution in hæmoglobin in comparison with the slight lessening in the number of red-blood corpuscles. Pallor, giddiness, weakness, dyspnœa, palpitation, etc., depend upon this disordered blood formation, which is also the cause of the blood changes themselves. The gastro-intestinal disturbances generally associated with chlorosis have been shown to be due to the excess of decomposition products in the intestine, accompanying the characteristic constipation. These break up the iron compounds of the food, and tend to prevent the due absorption of iron in its only assimilable form, and so lead to impaired blood production.—*N. Y. Med. Jour.*, Jan. 26, 1889, p. 100.

Dr. H. W. Loeb (*St. Joseph Med. H.*, October, 1889,) says that the blood of chloro-anæmic patients is always very fluid in consistency. the red-blood cells are diminished in number, often being as low as 2,500,000 per cubic millimeter, instead of 5,000,000 as the number is in health, and the hæmo-globinometer showed that the percentage of hæmoglobin in proportion to the normal quantity was often as low as twenty.

Such subjects always exhibit distressing pulmonary activity, necessitated by the increased amount of oxygen required to overcome the effects of a limited number of red cells. He concludes this interesting article by saying that all cases treated by him yielded to iron where it was tolerated.

Prof. Germaine Sée speaks in similar terms in his *Regime Alimentaire*, insisting upon the advantages of a ferruginous

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medication with suitable hygienic conditions, but remarks that many persons, and gastro-chloretic patients especially, do not support the usual iron preparations.

The selection, therefore, of a *non-constipating chalybeate* becomes of the highest importance.

Even in minute doses, iron renders the alvine evacuations black, and this is due to the reduction in iron salts, which are probably excreted as sulphides; this itself is a proof that the inorganic salts (and it applies equally to the so-called artificial albuminates of iron) are not entirely assimilated.

Chapoteaut has shown that the research for a suitable chalybeate should be in the direction of a truly natural product, rich in iron, such as is supplied by the aliments to the system; he proposes, therefore, a natural albuminate of iron derived from the hæmoglobin, which he has isolated from fresh bullock's blood. This is appropriately called "*Ferrum Sanguinis.*"

Ferrum Sanguinis is a semi-crystalline powder, of peculiar odor, forming a clear red solution in water. It is not an artificial iron compound, and it is impossible to detect by any chemical reagent the presence of iron in it without first destroying its composition by heat.

Prof. B. Roemer, city chemist, etc., of St. Louis, writes of "*Ferrum Sanguinis,*" "It has been tried by me and found to present a normal iron tonic, just such as is needed by the system, by which it is easiest assimilated."

The existence of iron in "*ferrum sanguinis*" may be shown without difficulty by incinerating a few grains in a clean porcelain capsule. To the charred residue a little nitrate of potash may then be added and heat applied until the carbonized mass be all oxidized. Now add sulphuric acid, drop by drop, until no further fumes are given off and the inside of the capsule be dry. Allow it to cool, and add a few drops of water. The addition of a solution of ferrocyanide of potasium gives a bright blue coloration, while sulpho-cyanide of potassium will give a red coloration. Both these tests show the presence of iron.

When iron and suitable treatment are indicated, it will be

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generally accepted that it is *not what is absorbed, but what is assimilated*, which is likely to benefit chlorotic patients, and the advantage of "*ferrum sanguinis*" over ordinary iron preparations has been successfully demonstrated by a series of clinical observations, from which three are selected.—*Translations—Clinique du Docteur Lafage*, Paris, 1889.

OBSERVATION I.—(*General Anæmia*). Mademoiselle, No. 1476. *Aet.* 17. History, previous good health; she menstruated for the first time a year ago; since then it has been irregular, scanty and painful, recurring frequently every fortnight, but sometimes not appearing for seven or eight weeks. She is treated, however, with the usual tonics, but without success. Iron preparations produce severe pain, constipation and have to be entirely suspended. She is pale, and the conjunctivæ and lips indicate pronounced anæmia; there is a considerable anæmic murmur of the heart; she cannot undertake any violent effort, but the pulse did not indicate any grave cardiac trouble. Two capsules of ferrum sanguinis were prescribed to be taken with the two principal meals; these were well supported, and the dose was increased to six daily after a week's treatment. A fortnight after, she came to the clinic again looking much better; the appetite and digestion were good; the headache and constipation had disappeared. She then unfortunately gave up taking the ferrum sanguinis and relapsed into her former condition, but, on coming to the clinic again, she was supplied with enough of iron for some time, and instructed to report every week. Two months afterwards she had lost all symptoms of anæmia.

OBSERVATION II.—(*Anæmia with amenorrhœa of several years standing*). Mademoiselle, No. 2006. *Aet.* 30. History—Governess; has suffered for a long time with migraine, especially at each epoch. The menses are very scanty and continue only a few hours; sometimes there is nothing at all, but she always suffers very violent pain in the stomach; in last few months her condition is aggravated; sleeps very little; cannot eat; has great weakness, and can no longer follow her profession. Tartrate of iron has hitherto given good results, but now cannot be supported, and is obliged to be suspended. The treatment with ferrum sanguinis was commenced in May, two capsules before the principal meals; they were well tolerated, and after twenty days the dose was increased to six daily. There was considerable improvement after some little time, but, fearing a return of these ac-

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cidents, the ferrum sanguinis was continued for several months. To day, the 20th of September, the patient may be considered cured. October 10th; for the last month she has taken no ferrum sanguinis and her condition is as satisfactory as possible.

OBSERVATION III.—Marie X., No. 3051. *Aet.* 21. History—born in Brittany; employed in Paris as a domestic servant for the last three months; suffers since her arrival with violent headaches and nausea; the appetite has almost completely disappeared, and the conjunctivæ and lips are discolored. February 10th, this well characterized case of anæmia was treated with four capsules of ferrum sanguinis daily, increased to six after a fortnight. A couple of months later she appeared to be completely restored, after passing a short time in the country.

Ferrum sanguinis is best prescribed in spherical capsules containing 25 centigrammes.

Clinical Reports.

A Case of "Ear Cough."

By ANDREW H. SMITH, M. D., of New York, N. Y.

PHYSICIAN TO THE PRESBYTERIAN HOSPITAL.

Mr. V. a robust man, about 35 years of age, called on me May 3rd, with the history that he had had the influenza in January, and had not been free from cough since. The cough was very frequent, of a dry character, and resulted in expelling very small pellets of mucus. It was extremely troublesome at night, depriving him of rest, and each morning on arising there occurred a paroxysm so severe as to leave him completely exhausted. His appetite and digestion were normal.

Physical examination of the chest and also of the abdomen, gave a purely negative result. Searching for a reflex source of the cough, I examined the oral and nasal cavities without result. The left ear also was found normal, but the speculum showed on the posterior wall of the right meatus, a red, shining, dry patch of thickened membrane, evidently the result of a chronic inflammation. This was sensitive to pressure with the probe, but the patient was not aware of its existence.

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Believing that this was the source of the cough, I applied as a test a solution of cocaine on a pledget of cotton, directing the patient to renew the application on going to bed, and again in the morning before rising. The result was a night of perfect comfort, and an absence of the usual morning paroxysm of cough. A few days of treatment with a weak solution of chromic acid, and afterward with nitrate of silver, effected a perfect cure without the use of internal medication.

Correspondence.

Potassic Nitrate for Chill, Etc.

Mr. Editor:—To answer fully and specifically the great number of communications received from physicians throughout the country, asking additional information in relation to the use of *potassii nitras in malarial affections*, would necessitate the occupation of the greater part of my time. I will say in brief, that I have treated more than two hundred cases of chronic chills of malarial origin, from a few months to year's standing; many complicated with enlargement of the liver and spleen, dropsy, jaundice, etc., all more or less emaciated and anemic. Nearly every case was cured with a single dose of *potassii nitras*. From two to fifteen grains of the salt—according to age—dissolved in a half ounce of water, administered just prior to the chill or during its continuance, did not only abort or arrest the chill, but effectually prevented its recurrence.

In order to test the value of the remedy, I employed no subsequent treatment, but left the restoration to health (which was in nearly every instance rapid and satisfactory) to the *vis medicatrix naturæ*.

I am fully assured that from two to fifteen grains of *potassii nitras* will usually abort or arrest a chill arising from any cause. A large dose is not well borne by the stomach, and frequently, in my hands, caused most alarming and distressful symptoms, by producing a prolonged depression of the heart's action. Very respectfully,

J. D. HUNTER, M. D.

352 *Ireland, Avenue, New Orleans, La.*, May 12th, 1800.

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Proceedings of Societies, Boards, etc

MEETING OF THE CONVENTION TO ARRANGE FOR SEVENTH DECENNIAL REVISION OF THE UNITED STATES PHARMACOPŒIA.

This Convention was opened in the Law Lecture Hall of Columbian University, Washington, D. C., at noon, on Wednesday, May 7, 1890—Dr. R. Armory, President since 1880, in the chair.

One hundred and ninety of the two hundred and fifty delegates appointed were present.

Twenty-six States were represented by delegates. Twelve States were not represented. Medical schools and colleges were represented by thirty delegates; incorporated medical societies were represented by fifteen; colleges and schools of pharmacy by twenty-seven; State pharmaceutical associations by thirty-one. The American Medical Association and the American Pharmaceutical Association, and also the Medical Departments of the Army and Navy and the U. S. Marine Hospital Service, were also represented by delegates.

The first business before the Convention was to appoint the Committee on Credentials. The report of this committee having been received and adopted, a Nominating Committee was appointed, composed of one from each delegation, who were charged with the duty of nominating officers for the Convention for the ensuing ten years; and also a Committee on Revision and Publication, consisting of twenty-five picked men representing the professions of medicine and pharmacy. This Nominating Committee went into session at 8 P. M., and did not adjourn until after 2 o'clock next morning. The results of their deliberations, which were presented to the Convention next day, were as follows:

Officers Elected to Serve Until the Meeting of the Convention in 1900.

President—Professor Horatio C. Wood, M. D., LL.D., Philadelphia, Pa.

First Vice-President—W. S. Thompson, Ph. G., Washington.

Second Vice-President—D. W. Prentiss, M. D., Washington.

Third Vice-President—J. M. Flint, M. D., United States Navy.

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Fourth Vice-President—A. E. Ebert, Ph. G., Chicago.

Fifth Vice-President—Professor W. M. Searby, Ph. G., California.

Secretary—Hobart A Hare, M. D, Philadelphia, Pa.

Assistant Secretary—G. H. Chs. Klie, St. Louis, Mo.

Committee on Revision and Publication for 1890—Charles Rice, Ph. D., *Chairman*, New York city; Joseph P. Remington, Ph. G., Ph. M., Philadelphia; Robert T. Edes, M. D., Washington; Charles O. Curtman, M. D., St. Louis; Roberts Bartholow, M. D., Philadelphia, Pa.; Professor P. W. Bedford, Ph. G., New York; N. S. Davis, Jr., M. D., Chicago, Ill.; C. Lewis Diehl, Ph. G., Louisville, Ky.; Robert G. Eccles, M. D., Brooklyn, N. Y.; John Godfrey, M. D., United States Marine Hospital Service; Willis G. Gregory, M. D., Buffalo, N. Y.; Carl S. N. Hallberg, Ph. G., Chicago, Ill.; Professor John M. Maisch, Ph. M., Philadelphia, Pa.; Professor George F. H. Markoe, Ph. G., Boston, Mass.; William M. New, M. D., United States Army; Charles Mohr, Ph. G., Mobile, Ala.; Oscar Oldberg, Ph. G., Chicago, Ill.; Frederick B. Power, Ph. G., Madison, Wisconsin; Henry H. Rusby, M. D., New York; Professor Lucien E. Sayre, Ph. G., Lawrence, Kansas; Alfred B. Taylor, Ph. M. Philadelphia, Pa.; Otto A. Wall, M. D., St. Louis, Mo.; Thomas F. Wood, M. D., Wilmington, N. C.; Fred. A. Castle, M. D., New York, *Secretary;* James M. Flint, M. D., Washington, *Treasurer;* and by resolution Horatio C. Wood, M. D., was added to the committee.

It will be the duty of this committee to revise the Pharmacopœia of 1880—a duty rendered necessary by the continued progress in medical and pharmaceutical science, which involves not only the introduction of many new formulas, but also the dismissal of many of the old ones, as well as changes in some that have to be retained, to make them conform to the results of research and experience in the past ten years. The work to be accomplished by this Committee of Revision will necessarily be slow and laborious, and it will probably be eighteen months from the time that the work is commenced before the new Pharmacopœia can be given to the public; but as soon as it is published it becomes at once the authorized professional standard for both physicians and pharmacists within the limits of the United States.

The Convention having elected officers, and also the Committee on Revision, it next became their duty to instruct the committee. To this end, each member of the Conven-

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tion was furnished with a printed list, which was headed "Draft of the General Principles which are to Guide the Next Committee of Revision," and divided into Sections on the following topics: No. 1, General Directions; No. 2, Assay Processes for Drugs; No. 3, Assay Processes for Galenical Preparations; No. 4, Assay Processes for Opium and Cinchona; No. 5, Description of Chemicals and Tests; No. 6, Chemical Formulas; No. 7, Proprietary or Patented Articles. This Section (No. 7) reads thus: "No substance which cannot be produced otherwise than under patented processes, or which is protected by proprietary rights, shall be introduced into the Pharmacopœia." No. 8, Nomenclature; No. 9, Specific Gravity; No. 10, Weights and Measures; No. 11, General Formula; No. 12, List of Reagents, Tables, etc ; No. 13, Publication of the Pharmacopœia; No. 14, Data for the Pharmacopœia to go into effect and supersede the Pharmacopœia of 1880; No. 15, Compensation of Experts.

These several topics were taken up and discussed, and voted upon *seriatim*, and then adopted, sometimes with modifications. In some cases no instructions were given, and the committee were allowed full discretion.

The most extended discussions were on the subject of standardizing drugs and preparations, and on changing the present method of parts by weight in favor of the metric system. The former of these was left to the discretion of the committee, but in regard to the latter, the committee was instructed to adopt the metric system.

It will doubtless be a surprise to many persons to know that the Convention voted almost unanimously for the adoption of the metric system; but the fact remains, that "while one man can lead a horse to water, forty men cannot make him drink." And physicians can continue to prescribe by the present system, entirely ignoring the metric, if it suits them. The Dispensatories will no doubt copy the new Pharmacopœia, but they will print right along side of it the equivalent of the old system.

The immense amount of discussion in the Convention is revealed by the fact that the stenographer's report covers over six hundred pages of type-written matter. But these discussions, participated in as they were by representative men from nearly every part of the United States and representing all branches of medical science, were very instructive and interesting.

The delegates from the Medical Society of Virginia were

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Dr. R. M. Slaughter, of the Theological Seminary; Dr. W. B. Towles, of the University of Virginia; Dr. John N. Upshur, of Richmond, Va.

Drs. Slaughter and Towles were in attendance, but Dr. Upshur did not attend.

The delegates from the Virginia Phaimaceutical Association were T. Roberts Baker, of Richmond; Robert Brydon, of Danville; C. B. Fleet, of Lynchburg.

MEDICAL EXAMINING BOARD OF VIRGINIA.

The first semi-annual meeting of the Sixth Annual Session of the Medical Examining Board of Virginia was held in the Hall of the House of Delegates, Richmond, Va., April 8th, 9th, and 10th, 1890.

The President, Dr. Hugh T. Nelson, of Charlottesville, called the meeting to order at 8 P. M. Tuesday, April 8th.

Roll-call by the Secretary, Dr. Hugh M. Taylor, of Richmond, showed the following members to be present: Drs. Brown, Budd, Buckner, Conway, Douglass, Finney, Glasgow, Green, Greer, Harris, Irving, Lewis, Nelson, Neff, Nash, Peek, Robinson, Stone, Taylor, Winston, and Young.

[CHIEF FEATURES OF THE LAW.

The principal feature of the recently amended law relating to the Medical Examining Board of Virginia is, that hereafter all candidates for examination for license to practice medicine, surgery, etc., in the State of Virginia, shall appear before the Board *in regular session*, instead of allowing any candidate to appear before three individual members of the Board, at their respective homes, as formerly. Provision, however, is made for cases of emergency, which claim of *emergency* must be decided by the President of the Board. Should the claim of emergency be sustained by the President, then he shall appoint three members of the Board to assemble at a given time and place, when and where they shall organize themselves into a committee, and *in session* examine the candidate or candidates for license, and pass upon the examination paper or papers, as if the Board were in full regular session.

As there are many interested parties inside and outside of Virginia who are yet uninformed, or else misunderstand the effect of the law regulating the practice of medicine in the State, at the risk of repeating matters we have published in former issues of the *Medical Monthly*, we will give a *resumé* of the requirements, etc., set forth in the present amended statute.

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The Medical Examining Board of Virginia went into effect January 1, 1885. Any one having had a license to practice medicine or surgery anywhere in the State of Virginia prior to that date is exempt from the operation of this law. But any other person who, since that date, has undertaken to practice medicine, surgery, etc., for compensation, without first having received a duly signed certificate of having passed a satisfactory examination before the Medical Examining Board of Virginia, and having his name "registered in the clerk's office of the county or corporation court for the county or corporation in which he shall reside," is practicing illegally; and on conviction before any of the courts of the Commonwealth, shall be fined "not less than $50 nor more than $500 for each offence, and shall be debarred from receiving any compensation for services rendered as such physician or surgeon."

PLAN OF EXAMINATION.

Under the by-laws approved at the last meeting of the Board, "the applicant is required to answer at least *three-fourths* of the questions satisfactorily, and he is to be rejected if he fails to answer satisfactorily *thirty-three and one-third* per cent. of the questions on any one section or sub-division of the whole examination. He is also required to sign his papers with a number furnished by the Secretary, who shall record the number after the applicant's name on his registered list to be kept for the purpose, and only the President and Secretary shall be allowed to examine the aggregate sheet during the examination."

In all examinations before the Board, if not distinctly so stated, it is always implied and understood that each party undergoing examination pledges his word of honor, without mental reservation or evasion in any manner whatsoever, that during such examination he will neither give to a fellow candidate, nor receive from him or from any other source, any information relating to the subject immediately under consideration, unless it be with the knowledge and consent of the Examining Committee.

The time alotted to make answers to questions in each Section is three hours.]

Examinations April 9th and 10th, 1890.

I.—SECTION ON CHEMISTRY.

Members—Drs. R. A. Lewis of Richmond (city), *Chairman;* Hugh T. Nelson, of Charlottesville, Jesse H. Peek, of Hampton, and P. B. Green, of Wytheville.

Ques. 1. Give the chemical composition and mode of preparation of nitric and hydrochloric acids; give their physi-

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cal and chemical properties, and the three most reliable tests for each.

Ques. 2. Name three of the most important salts of potassium; give their chemical properties and modes of preparation; and explain how bicarbonate of soda is made from sodium chloride.

Ques. 3. Give the composition of woody fibre, starch, and grape sugar, and explain how starch is converted into grape sugar.

Ques. 4. Explain the process of vinous and acetic fermentation, and of putrefaction.

Ques. 5. Give the true theory of combustion as taught by Lavoisier; explain the process of explosion; give the usual products of combustion—the cause of light in combustion.

Ques. 6. Give the sources of mercury, its mode of reduction when in combination, its economic uses, the preparations of mercury used in medicine, their chemical composition and modes of preparation, and the tests for corrosive sublimate.

II.—Section on Anatomy.

Members—Drs. Hugh M. Taylor, of Richmond (city), *Chairman;* William P. McGuire, of Winchester, Paulus A. Irving, of Farmville, and R. D. Huffard, of Chatham Hill.

Ques. 1. Name the bones of the tarsus, and the bones with which they articulate.

Ques. 2. Describe the anatomy of the shoulder joint.

Ques. 3. Give ligaments and muscles in relation with the hip joint.

Ques. 4. Give the relations of the common carotid artery.

Ques. 5. Give general and descriptive anatomy of the stomach.

Ques. 6. Give general and descriptive anatomy of the gall-bladder.

Ques. 7. Describe the great sciatic nerve, its origin and relations.

Ques. 8. Describe the dura mater.

III.—Section on (I) Hygiene and (II) Medical Jurisprudence.

Members—Drs. James Parrish, of Portsmouth, *Chairman;* S. W. Carmichael, of Fredericksburg, James W. Tankard, of Burgess Store, O. B. Finney, of Onancock, and C. B. Young (Homœop.)

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Ques. 1. How would you proceed to disinfect an empty room? Describe the manner of generating the disinfectant for this purpose.

Ques. 2. Give names of some of the most efficient disinfectants, and their special uses.

Ques. 3. In locating a well for drinking purposes, what should be its surroundings, and what important facts should be considered?

Ques. 4. Name the various infections that may be conveyed in milk, and describe how you would correct them.

Ques. 5. Give signs that are sometimes found on the dead body that will determine whether it is suicide or homicide.

Ques. 6. How would you discover whether a person found dead in the water was drowned or thrown in the water after death?

IV.—Section on Physiology.

Members—Drs. William L. Robinson, of Danville, *Chairman;* A. Trent Clarke, of South Boston, I. S. Stone, of Lincoln, and Leigh Buckner, of Roanoke.

Ques. 1. What would be the effect on the heart's action of cutting both vagi? also of cutting one? What is meant by the automatic action of the heart?

Ques. 2. Explain fully the meaning of reflexion, coördination, volition, and automatism.

Ques. 3. What are the Malpighian bodies? Describe their location and function. Tell of their size and how connected with adjoining structures.

Ques. 4. Describe the island of Reil, give its functions, and give the important centres in and immediately adjoining it.

Ques. 5. How would you explain the difference in the flow of the arteries, capillaries, and veins, and what is the pulse?

Ques. 6. What is the nervous mechanism of animal heat? and how would you explain the functions of heat production and heat dissipation?

Ques. 7. What is glycogen? How is it produced, and what are its supposed uses?

Ques. 8. Give physiological explanations of sleep.

V.—Section on Materia Medica and Therapeutics.

Members—Charles C. Conway, of Rapidan, *Chairman;* S. W. Budd, of Petersburg, J. H. Neff, of Harrisonburg, R. F. Young, of Love's Mills, and M. A. Douglas Homœop.), of Danville.

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Ques. 1. What are oxytocics? Name some of the principal ones and the modes of administration.

Ques. 2. Name four of the principal antipyretics, with doses of each, and the modes of administration.

Ques. 3. Give properties, physiological action, and medicinal uses of subnitrate, of bismuth and hypophosphite of lime.

Ques. 4. Give formula for Dovers powder.

Ques. 5. Name source, doses, and uses of pilocarpine.

Ques. 6. What medicines are regarded as heart stimulants? Name two principal heart depressants. Give doses of each of the agents in classes named.

Ques. 7. What is the dose of atropine? What nerve centre does it affect, and how—whether depressant or stimulant?

Ques. 8. Give the different methods for the application of cold to the human body for the reduction of temperature.

Ques. 9. Give special indication for uses, doses, and time of administration of tincture of chloride of iron.

Ques. 10. Name some of the chief anthelmintics, their doses, and times for administration.

Ques. 11. Give chief uses of ergot in practice, and name conditions when its use is inadmissible in labor.

Ques. 12. Write a prescription for acute bronchitis, and one for chronic bronchitis.

VI.—Section on Obstetrics and Gynæcology.

Members—Drs. H. M. Nash, of Norfolk, *Chairman;* Robert Glasgow, of Lexington, B. L. Winston, of Hanover C. H., R. I. Hicks, of Warrenton, and George A. Taber (Homœop.), of Richmond.

Qnes. 1. Give the normal diameters of the cavity of the female pelvis, and the smallest measurements consistent with safe delivery.

Ques. 2. Describe the ligaments of the uterus.

Ques. 3. Give the histology of the ovary, and the means by which the matured ovum reaches the uterus.

Ques. 4. Mention the chief causes of the premature expulsion of the ovum, and give diagnosis and treatment of threatened abortion.

Ques. 5. Give the various methods of diagnosticating the position of the fœtus.

Ques. 6. Note the most important pathological conditions likely to occur during pregnancy, and give the most approved treatment of the pernicious vomiting of pregnancy.

Ques. 7. Give the management of the third stage of labor.

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Ques. 8. What are the indications for the induction of premature labor, and the methods of procedure?

Ques. 9. Classify uterine hæmorrhage, stating briefly the the treatment of each variety.

Ques. 10. Give the structure of the mammary gland and the prophylaxis, and treatment of mammary abscess.

Ques. 11. Enumerate the varieties of extra-uterine pregnancy, and give the treatment of the tubal variety after rupture.

Ques. 12. What lesions must occur in the true pelvis before complete prolapse of the uterus can ensue?

VII.—Section on Practice of Medicine.

Members—Drs. Rawley W. Martin, of Chatham, *Chairman;* Bedford Brown, of Alexandria, Henry M. Patterson, of Staunton, W. J. Harris, of Blackstone, and W. P. Jones (Homœop.), of Petersburg.

Ques. 1. Give symptoms and treatment of scarlet fever.

Ques. 2. Give symptoms of gastric ulcer.

Ques. 3. Give diagnosis of ascites.

Ques. 4. Give complications of acute Bright's disease.

Ques. 5. Causes of aphasia.

Ques. 6. Causes of croupous pneumonia.

Ques. 7. Name the varieties of valvular diseases of the heart.

Ques. 8. Give the pathology of typhoid fever.

Ques. 9. Give cause of cerebro-spinal meningitis.

Ques. 10. Give treatment of cerebro-spinal meningitis.

Ques. 11. Give symptoms of acute pleuritis.

Ques. 12. Give treatment of hæmoptysis.

VIII.—Section on Surgery.

Members—Drs. T. B. Greer, of Rocky Mount, *Chairman;* G. D. Meriwether, of Pedlar Mills, L. Ashton, of Falmouth, T. M. Bowyer, of Liberty, and F. Webster (Homœop.), Norfolk.

Ques. 1. Give causes of coxalgia; erysipelas; aneurism.

Ques. 2. Morbid anatomy of phlebitis; arthritis.

Ques. 3. Symptoms of intra-capsular fracture of neck of femur; fracture of patella.

Ques. 4. Diagnosis of concussion of brain; caries and necrosis of bone; femoral hernia.

Ques. 5. Treatment of ulceration of cornea; periostitis; senile gangrene.

Dr. Hugh T. Nelson, of Charlottesville, Va., presented the following as the *Report of the President:*

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CHARLOTTESVILLE, VA., April 7, 1890.

Gentlemen of the Examining Board of Virginia:

In the recess of the Board just closed—embracing the time that has passed from the date of our session in Roanoke city, in the month of September last, to the present—although as individual members of the Board you have, with few exceptions, been called upon in your official capacity for no harassing or embarrassing work, matters of vital importance to the maintenance of the principles upon which is based the organic law creating this Board have transpired, and must be brought to your notice.

First, however, it may be best to give you some idea of the general working of your chief officer in the time specified.

On September 11th a letter from Dr. William P. McGuire, of Winchester, reached me, inquiring if one Dr. Whitlock, who had opened an office in his city, was a legally qualified practitioner of medicine. I replied that no such person had ever passed the State examination, and unless he had practiced in the State prior to January 1, 1885, he certainly was a violator of the law regulating the practice of medicine and surgery in this State.

I have been much beset with requests for special examinations, and in a very short time had to refuse the privilege to no less than thirteen individuals. This may seem unwise to some members of the Board, but as I conceive that the spirit of the law only grants special examinations to persons who have been prevented from attending the meetings of the Board by *sickness or calamity*, I have rigidly adhered to what I conscientiously believed to be my duty. Nearly every application for a special examination is based on grounds of impecuniosity on the part of the applicant, accompanied by statements to the effect that he has persons dependent on him for daily bread, and backed up by letters from influential persons in his community. Still, if once the door is opened to such knockings, it can never be justly closed, and the past history of this Board will repeat itself.

* * * * * * * *

On November 22d I received a letter from Dr. J. Edwin Michael, Dean of the Faculty of Physic of the University of Maryland, asking for an official statement of the names of the graduates of this School rejected at the session of the Board recently held in Roanoke. I promptly furnished him the desired information, and in a few days received another very courteous and kind letter from Dr. Michael,

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stating that the information received was exactly what he wanted, and that he was glad to get it.

* * * * * * * *

And now, gentlemen of the Medical Examining Board of Virginia, my task is done, and, though I shall cease to regret the necessity, I must now and here sever my connection with you in your official capacity. In a relation lately assumed with the University of Virginia, I feel that I am out of place as a member of this Board. Gladly would I remain with you, and share your lots and partake of your triumphs, which will one day come, if you all remain true to the trust you have accepted, did I not see the incompatibility of workings in the two spheres. One of the main lines by which you are to elevate the rank and file of our profession is, to take care that the diploma-making and licensing powers are kept as far apart as possible.

I beg you all to believe that I shall never cease to take a very deep interest in the work you are doing. I extend to each of you my heartfelt thanks for your courtesy to me in the time I have had the honor to preside over you; nay, I thank you for having conferred the honor.

The meetings of this Board have always been a great source of pleasure to me, and on returning home after our sessions I have always felt that contact with you as a body and as individuals has braced me up for work ahead.

While I shall in future be debarred the pleasure of attending your meetings, the hope is still in me that, as individuals in pleasant commune, we shall again—aye, and again meet each other.

One, gentle as a woman, brave as Coeur de Leon, courteous and affable, but unbrooking of insult, each of us misses from our ranks to-night. The remembrance of Walker's tragic death still haunts me. We can all stand with uncovered heads at mention of his name, for right sure am I that not one man here to-night could say ought but good of the lamented *Dr. Z. J. Walker*.

To those who come among us for the first time to-night, my farewell must be my greeting. I cannot but say, however, to them, as to you all, that the time and money which you spend in attending the sessions of this Board are not lost; but, like bread upon the waters, will return to you after many days, in the shape of a national medical profession purged of ignorance and quackery, and embelished with the names of men whose attainments shall be the boast of every citizen of the land.

HUGH T. NELSON, M. D., *President*.

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Dr. Hugh T. Nelson having severed his connection with the Board, Dr. Hugh M. Taylor, of Richmond, Va., was elected President, and Dr. Paulus A. Irving, of Farmville, Va., Secretary and Treasurer, in place of Dr. Taylor.

On motion of Dr. William L. Robinson, the President was instructed to revise the Sections, and redistribute the members as was deemed best.

Dr. Taylor requested the Board to appoint Drs. Robinson, Irving, and himself a committee to carry out the provisions of Dr. Robinson's resolution. He also expressed the hope that members would notify the committee if they wished to serve on any special committee. As far as possible the committee would be glad to comply with such requests. Section VI. of the By-Laws provides that "each committee shall elect its own chairman." The chairmen indicated in the subjoined report of the Committee on Revision of Sections are, therefore, chairmen *pro tem.*, and will act until the September meeting of the Board, at which time each Section will elect its permanent chairman.

Section V. of the By Laws provides that the Executive Committee shall elect its chairman. Section IV. provides that the Secretary of the Board shall be Secretary of the Executive Committee.

Revised List of Sections.

Chemistry—Drs J. H. Neff, of Harrisonburg, Chairman; Jesse H. Peek, of Hampton, P. B. Green, of Wytheville, and Benjamin Harrison, of Richmond city.

Anatomy—Drs. Hugh M. Taylor, of Richmond city, Chairman; William P. McGuire, of Winchester, R. D. Huffard, of Chatham Hill, and Paulus A. Irving, of Farmville.

Hygiene and Medical Jurisprudence—Drs. O. B. Finney, of Onancock, Chairman; T. B. Greer, of Rocky Mount, J. W. Chancellor, of Charlottesville, and James W. Tankard, of Burgess' Store.

Physiology—Drs. I. S. Stone, of Lincoln, Chairman; Robert Glasgow, of Lexington, R. F. Young, of Love's Mills, and S. W. Carmichael, of Fredericksburg.

Materia Medica and Therapeutics—Drs. C. C. Conway, of Rapidan, Chairman; A Trent Clarke, of South Boston, S. W. Budd, of Petersburg, James Parrish, of Portsmouth, and M. A. Douglass (Homœop.), of Danville.

Obstetrics and Gynæcology—Dr. Herbert M. Nash, of Norfolk, Chairman; B. L. Winston, of Hanover C. H., G. D. Meriwether, of Pedlar Mills, H. M. Patterson, of Staunton, and George A. Taber (Homœop.), Richmond city.

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Practice of Medicine—Drs. Rawley W. Martin, of Chatham, Chairman; Bedford Brown, of Alexandria, R. J. Hicks, of Warrenton, and W. P. Jones (Homœop.), of Petersburg.

Surgery—Drs. William L. Robinson, of Danville, Chairman; T. M. Bowyer, of Liberty, L. Ashton, of Falmouth, Leigh Buckner, of Roanoke, and F. Webster (Homœop.), of Norfolk.

Legislative Committee—Drs. Martin, Nash and Glasgow.

Executive Committee—Drs. Robinson, Nash, Conway, Taylor, and Irving—last two *ex officio*.

The following is a register of the twenty-six successful applicants during this examination:

Dr. Charles V. Carrington, of Richmond, Va.—Graduate of University of Virginia 1889.

Dr. H. Tucker Chelf, of Culpeper, Va.—Graduate of University of Virginia and Jefferson Medical College, 1889 and 1890.

Dr. (Miss) C. Lee Haynes, Palmer, Mass.—Graduate Woman's Medical College, Philadelphia, 1888.

Dr. E. C. Levy, Richmond, Va.—Graduate Medical College of Virginia, 1890.

Dr. John W. Harrison, Petersburg, Va.—Graduate College Physicians and Surgeons, Baltimore, 1890.

Dr. Alexander Duane, Norfolk, Va.—Graduate College Physicians and Surgeons, New York, 1881.

Dr. James G. Brown, Woodville, Va.—Graduate University of Pennsylvania, 1889.

Dr. Claudius J. Riddick, Cypress Church, Va.—Graduate Bellevue Hospital College, New York, 1890.

Dr. James Ligon Kent, Dublin, Va.—Graduate Bellevue Hospital Medical College, New York, 1890.

Dr. Andrew D. Estill, Lexington, Va.—Graduate Jefferson Medical College, 1890.

Dr. Sydney J. Baker, Bedford City, Va.—Graduate College Physicians and Surgeons, Baltimore, 1890.

Dr. Harry L. Myers, ———.—Graduate ———.

Dr. Preston E. Wolfe, Adevolph, Smyth county, Va.—Graduate University of the City of New York.

Dr. Paul Brandon Barringer, University of Virginia.—Graduate University City of New York and University of Virginia, 1877 and 1878.

Dr. Allen B. Montz, Charlottesville, Va.—Graduate University of Vermont, 1889.

Dr. Cuthbert Gilham, Richmond, Va.—Graduate University of Virginia, 1887.

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Dr. F. G. Anderson, Wabash, Va.—Graduate College of Physicians and Surgeons, Baltimore, 1889.

Dr. Richard G. Simmons, Roanoke, Va.—Graduate Jefferson Medical College, 1889.

Dr. Joseph H. Lawrence, South Quay Va.—Graduate Medical College of Virginia, 1890.

Dr. W. P. Mathews, Manchester, Va.—Graduate Medical College of Virginia, 1860.

Dr. John F. Woodward, Richmond, Va.—Graduate Medical College of Virginia, 1890.

Dr. James R. Speight, Berkley, Norfolk county, Va.—Graduate Medical College of Virginia, 1890.

Dr. Charles B. Hargrove, Baltimore.—Graduate University of Maryland.

Mr. Lewis B. Firly, Roanoke, Va.—Non-graduate.

Mr. O. McL. Smith, Sparta, N. C.—Non-graduate.

Mr. Walter B. Lafferty, Crozet, Ala.—Non-graduate.

The subjoined tables show that forty-four applicants were before the Board; three withdrew after writing parts of the examinations; twenty-six were licensed by the Board, and fifteen were rejected.

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INSTITUTIONS REPRESENTED BY THE APPLICANTS

BEFORE THE

MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

January 1st, 1885, to April 10th, 1890.

	Total number of applicants for examination from each Institution.	Total number awarded certificate on first examination.	Total number rejected on first examination.	Rejected applicants appearing for exam'tn 2d time.	Certificates awarded on 2d examination.	Rejected 2nd time.	Rejected applicants appearing for exam'tn 3d time.	Rejected 3rd time.	Incomplete examinations, withdrawals or otherwise.
Medical College of Virginia	72	58	11	5	4	1	....	.....	3
University of Virginia—Medical Department	46	45	1	....	....	....	....	....	....
College of Physicians and Surgeons, Baltimore, Md	45	30	13	6	4	2	....	....	2
University of Maryland—Medical Department, Baltimore	53	34	19	4	2	2	1	1	....
Washington University, Baltimore, (Extinct.)	1	....	....	....	....	....	....	....	1
Baltimore Medical College, Maryland	3	....	2	....	.....	...	....	.....	1
Baltimore University—School of Medicine	3	....	3	1	.....	1	....	....	....
Jefferson Medical College, Philadelphia, Penn	20	13	7	2	2	...	....	.....	....
University of Pennsylvania, Medical Department, Philadelphia.	3	3	.....	.....	....	....	....	....	....
Medico Chirurgical College, Philadelphia, Penn	1	....	1	1	.....	1	1	1	.....
Woman's Medical College of Pennsylvania, Philadelphia	1	1	....	....	.....	....	....	....	....
Hahnemann Homœopathic Medical College, Philadelphia, Penn.	2	2	.....	....	....	....	....	..	....
Bellevue Hospital Medical College, New York	8	7	1	1	1	....	....	....	....
University of the City of New York—Medical Department	12	9	3	1	.....	1	...	.....	....
College of Physicians and Surgeons, New York	5	5	....	.....	.....	....	.....	....	....
Geneva Medical College, New York	1	1	....	....	....	....	....	....	....
National Medical College, Washington, D. C	1	....	1	....	....	....	....	....	....
University of Georgetown, D. C., Medical Department	1	1	.....	....	.....	....	....	....	.....
Howard University, Med. Department, Washington D.C. (colored)	13	2	11	4	....	4	....	....	....
Louisville Medical College, Kentucky	5	1	4	....	....	.....	.....	....	....
Hospital Medical College, Louisville, Ky	4	3	1	.....	....	.....	.. ..	....	.. ..
Kentucky School of Medicine, Louisville	2	2	.....	....	....	....	....	.....	.....
University of Louisville, Ky., Medical Department	2	1	1	.....	....	....	.....	...	....
University of Tennessee—Medical Department, Nashville	1	1	....	....	....	.....	....	....	.....
Vanderbilt University—Medical Department Nashville, Tenn.	3	2	1	1	1	....	.....	....	....
Detroit Medical College, Michigan	2	1	1	1	1	....	.....	....	....
University of Michigan—Medical Department, Ann Arbor	2	2	....	....	.....	....	....	....	....
St. Louis Medical College, Missouri	1	1	....	....	....	....	.....	.....	....
Columbus Medical College, Ohio	3	1	2	1	1	.....	....	....	.....
Cincinnati Medical College, Ohio	1	....	1	.....	.....	...	.. ..	....	....
Cleveland Homœopathic Hospital Medical College, Ohio	2	2	....	....	....	.....	.....	....	....
Leonard Medical College, Raleigh, N. C., (colored)	5	3	2	....	....	.....	.....	...	.....
Medical College, State of South Carolina, Charleston	1	.....	1	1	1	....	....	.....	....
University of Vermont, Burlington	1	1	....	....	....	....	.....	.....	.....
Heidelburg, Germany	1	1	.....	....	....	....	....	....	....
St. George Hospital, London, England	1	1	..	.....	.....	....	....	....	....
King's George Hospital, London, England	1	....	1	....	.....	.....	....	....	....
Colleges unknown, (Record not sent by Examiners)	5	4	....	....	....	....	....	....	1
Non-Graduates	25	9	12	1	.....	1	.....	....	4
Totals	*358	*245	*100	30	17	13	2	2	12

Highest Mark, 742—Average, 92¼.
Lowest Mark, 274—Average, 34¼.

*** While from the total of the first column, it would appear that there were 358 applicants, 7 of these each held diplomas from two institutions, thus making the real total number of applicants 351; six of the seven applicants received certificates—thus making the total number awarded certificates 246 (second column); one of the five was rejected—thus making the total number rejected, 100 (third column).**

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Standing in each Section of the Applicants Rejected April 9th and 10th, 1890, and the Colleges from which they Received Diplomas.

The standard of requirements for license is an average mark of 75 per cent on the whole. If, however, an applicant receives less than 33⅓ per cent. in any one of the eight Sections, he is rejected.

[This Table is introduced solely for the purpose of indicating the branches of study in which the greatest deficiencies of preparation of the applicants are most noticeable. In addition, it should be remarked that had it been required to rate the applicants on ordinary correctness of English grammar, at least one-third of those who passed satisfactory examinations on the required branches of medical study would have received very low markings, and far more than one-half of those rejected showed, in their examination papers, lamentable ignorance of English composition, spelling, etc.]

Nos. with which examination papers were signed.	INSTITUTIONS OF GRADUATION.	Chemistry.	Anatomy.	Hygiene and Med. Jurisprudence.	Physiology.	Materia Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	Aggregate.	Average.	Remarks.
5	College Physicians and Surgeons, Baltimore...	14	68	82	20	78	75	40	65	442	55.2	
13	University of Maryland.....	35	45	95	42	96	84	75	95½	568	71	
17	Baltimore University, School of Medicine....	35	67	90	42½	90	74	75	80	554	69.2	
19	University Medical College, New York.....	20	30	75	37½	81	56	75	74	449	56.1	
28	Medical College of Virginia.....	17	63	.....	.....	.....	.....	.....	.....	80	.....	withd'w
30	Medical College of Virginia.....	68	54	75	56¼	75	80	40	75	524	65.4	
36	Medical College of Virginia.....	78	43	40	71¼	35	70	48	79	465	58.1	
25	Howard Medical College.....	43	41	60	34	100	80	50	80	485	61	
29	Howard University, Washington, D. C.....	20	52	75	35	64	75	55	78	454	56.6	
31	Howard University, Washington, D. C.....	21	25	65	20	57	70	40	30	328	41	
41	Howard University, Washington, D. C.....	....	51	60	22½	72	77	58	96	337	54.5	
33	Leonard Medical College, Raleigh, N. C.....	78	54	85	30	54	50	50	50	451	56.3	
42	Louisville Medical College, Kentucky.....	8	22	45	30	85	70	82	52	394	49 2	
43	Louisville Medical College, Kentucky.....	14	26	60	10	84	45	84	68	341	42.5	
15	Non-Graduates	47	..	....	....	....	....	....	....	47	.....	withd'w
32	Non-Graduates	24	54	...	.....	.....	.....	....	....	78	.....	withd'w
35	Non-Graduates	16	17	82	60	30.5	42	15	71	274	34.2	
44	Non-Graduates	34	60	70	45	92	75	84	80	554	69.2	

Institutions Represented by the Applicants who came before the Medical Examining Board of Virginia, In Session in Richmond, April 9th and 10th, 1890.	Total Number Applicants from each College.	Total number Applicants Licensed.	Total Number Applicants Rejected.	Incompleted Examinations by Withdrawals.
University of Virginia.....	2	2	.....	.....
University of Virginia and Jefferson College, Maryland.....	1	1	.....	.....
University of Virginia and University City of New York.....	1	1	.....	.....
Medical College of Virginia.....	8	5	2	1
College of Physicians and Surgeons, New York City.....	1	1	.....	.....
University of City of New York.....	2	1	1	.....
Bellevue Hospital Medical College, New York.....	2	2	.....	.....
Jefferson Medical College, Philadelphia.....	2	2	.....	.....
University of Pennsylvania, Philadelphia.....	1	1	.....	.....
University of Maryland, Baltimore.....	2	1	1	.....
College Physicians and Surgeons, Baltimore.....	4	3	1	.....
Baltimore University, School of Medicine.....	1	.....	1	.....
University of Vermont.....	1	1	.....	.....
Woman's Medical College of Pennsylvania, Philadelphia.....	1	1	.....	.....
Howard University, Medical Department.....	4	.....	4	.....
Leonard Medical College, North Carolina (colored).....	1	.....	1	.....
Louisville Medical College.....	2	.....	2	.....
Colleges unknown.....	1	1	.....	.....
Non-Graduates.....	7	3	2	2
Total.....	44	26	15	3

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SOUTH CAROLINA MEDICAL ASSOCIATION.

The session was held in Laurens, S. C., April 15th, 16th, and 17th, 1890. We regret not being able to state exact order of the proceedings. The following are synopses, however, of the more important papers presented during the session:

A Probable Case of Cyst of the Spleen.

Dr. Jas. K. Gilder, M. D., of Newberry, S. C., on account of the rarity of the disease, and other features of an unusual character, reported the following case:

J. F. R. white male, age 19, single, native of this State; a perfect specimen of manhood, has always led an active life, and been very temperate. Family history good. During the summer of 1887, he had typho-malarial fever, from the effects of which, he was several months in recovering.

January 5th, 1889. Consultation with Dr. J. P. Johnson. Found him with a case of left pneumonia Cough very dry and tight from the beginning; temperature from 103° to 104° F. He had a very severe pain over the spleen and left lobe of the liver, being severe enough at times to compel the use of morphine. On the fifth day his cough ceased. About March 1st, he came from his home to Newberry. There was consideroble tenderness and swelling over the left hypochondriac region, apparently due to an enlarged spleen. After treatment, tenderness and swelling partially disappeared, and he returned to the country. A few weeks later he visited Glenn Springs, but derived no benefit from the water.

About six weeks after his return from the Springs, he presented then the appearance of a case of abdominal dropsy. The chest walls were very much bulged, so much so that it was almost impossible to button the top button of his vest. The swelling or sac, extended downwards two inches below the umbilicus, and three inches to the right of the median line. Respiration very quick, and very little air entered lower part of left lung. Pulse 100. It was easy to diagnose the contents of the sac, as being fluid.

On June 1st, a medium size aspirating needle was introduced in left side about two inches below the ribs, to draw the fluid off; but being unable to do so, introduced the largest side needle, and succeeded in *drawing off fifteen pints and twelve ounces of a thick, dark fluid*, presenting the appearance of a mixture of blood and pus. A specimen of the

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fluid was sent to Dr. E. E. Jackson, of Columbia, for analysis, who furnished the following "report of analysis."

Color, broma; odor, very offensive, like typhoid stool; specific gravity, 1015. Alkaline. Bile shown by nitric acid test; albumen—a filtered quantity became a solid mass on boiling. Ether dissolves oil and yellow bile coloring. No indication of starch by iodine. No well-defined blood corpuscles. Fat acid crystals by microscope. Brilliant granules. Granules and round cells.

Indications.—"1. Raises suspicion of an opening in intestinal tract; nullified by No. 5. Nos. 2, 3 and 4, point clearly No. 6, is negative. 7. Indicates liver—felenitic acid. 8. This is often seen in cancer, though I find no caudate cells. 9. This is just such a mass as a piece of decomposed liver would present."

You see everything points to the liver as the headquarters of the trouble.

June 8th. Drew one gallon and ten ounces of fluid, simi- to that above described.

June 12th. The patient suffered considerably during the night, with pains in the bowels, and the following morning he passed by the bowels two quarts of the same kind of fluid as above described; passed a little the following day.

June 22nd. Drew one and one-half gallon.

June 29th. Drew three quarts and one half.

July 13th. Drew one quart and one pint.

About the 1st of August, again aspirated, but failed to find any fluid.

The whole amount of fluid drawn and passed by the bowels, was six gallons two pints, and six ounces. The sac after each aspiration, would retract under ribs.

The patient began to improve after the first aspiration, and continued to do so until about the 1st of August, when he began to complain a good deal of pain on the right side, and his general health began to fail, but there was very little swelling at this time. Our object was by repeated aspirations to establish union between the sac and abdominal walls, in order to make a free incision and drainage.

After our failure on August 1st, to get any fluid, and his general health apparently failing, he was sent to Dr. James H. McIntosh, then in Bellevue Hospital, New York, with the request that he have him examined by Dr. A. L. Loomis, and carry out any plan of treatment they thought advisable. The patient began to improve from the time he left home.

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Dr. Loomis being out of the city, he was first examined by his son, Dr. H. P. Loomis, who thought the case probably one of abscess of the liver; and that the abscess had been thoroughly drained by repeated aspirations, and the opening into the bowel. He was examined a few days later by Dr. E. G. Janeway, and the result of his examination as given by Dr. McIntosh, is appended.

"He pronounced his lungs and heart perfectly normal. Spleen considerably enlarged. The abdomen not swollen at all on left side. He considered the case one of those considerably rare cysts of the spleen. Throwing out abscess of the left lobe of the liver became between your area of hepatic dullness, and the enlarged area of splenic flatness, there was a distinct space of about two inches in width and close to and parallel with the median line, over which you get a tympanitic note."

Patient returned home in about two weeks, and made a good recovery. He has been residing in a malarial section of the country during the present year, has had a few chills within the past two months, with some pain and slight swelling over the spleen, which have disappeared under anti-malarial treatment.

(I.) **Laparotomy for Fibroids of the Uterus.** (II.) **Dermoid Cyst of Both Ovaries.** (III.) **Ectopic Gestation, and for** (IV.) **Intra-Ligamentary Cyst of the Broad Ligament.**

Cornelius Kollock, A. M., M. D., of Cheraw, S. C., reported the following cases:

Case I.—R. F., colored, aged 40, has had three children; youngest 16 years of age; has never had a miscarriage; menstruation has always been normal as to quantity and quality. Consulted me on the 2nd of May, 1889; abdomen was greatly distended; measured 49 inches at the umbilicus; there was no fluctuation; tumor was hard, and situated high in abdominal cavity; menstruation was regular up to within one week before the operation. On the 20th of May laparotomy was done. An incision of three inches was first made in linea alba, and afterwards increased to five inches, to the left of the umbilicus. A larger fibroid was found attached to the fundus uteri by a pedicle measuring two and a half inches. Pedicle was ligated by a double ligature of silk and cut off. The tumor was solid throughout, and weighed 12 pounds. The uterus was very much enlarged, and studded from fundus to os uteri, with fibroids averaging from the size of a pullet's egg to that of a buck-shot. None

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of the smaller fibroids were pedunculated, nor were they exactly interstitial; that is, they were not imbedded in the uterine tissues, but were attached to the external surface by a broad base. They were fourteen in all, and sat upon the uterus like toads upon a turf-rock. To leave this woman in the condition she was was to consign her to a living death. Porro's operation was decided upon as the only procedure that furnished any relief. This was done, and the whole body of the uterus was removed. The uterus was afterwards opened, and in it were found three more fibroids about the size of cherries, and a fœtus of three months, which had been dead some time, as decomposition was well advanced.

In this case, all signs of pregnancy were conspicuously absent. A remarkable feature was that there had never been any threatening of abortion, nor any hæmorrhage—there was not even an exaggerated menstrual flow. The operation was borne well, and the incision was healing kindly by first intention, and there was every prospect of a good recovery, until death ensued from heart-failure.

Case II.—Mrs. A. R. C., white, aged 31, has had three children; youngest 8 years of age; general health apparently good. Case was first seen on the 4th of February, 1890. The abdomen was a good deal distended, particularly in the iliac regions; more in the right than in the left. Ovarian cyst was diagnosticated on both ovaries. On the 5th of February abdominal section was made, and a dermoid cyst was found on each ovary—the one on the right weighing 8 pounds, that on the left 4¾ pounds. Both cysts had distinct pedicles, which were ligated, cut, and dropped in the cavity. The cyst of right ovary was filled with hair and fragments of bone, in a state of decomposition, floating in a thick muddy-looking fluid. The cyst of the left ovary was rather nondescript in character, was filled with a thick dirty-white semi-fluid mass, resembling the mucus scrapings from the intestines of a hog when being prepared for cases for sausages. Dark clots were also seen, which seemed to be particles of hair, but not sufficiently solid. After removal of the cyst, the uterus was examined, and, as had been previously suspected, gestation had advanced to about the fifth month.

A remarkable fact in this case is that conception should have taken place with the ovaries in so diseased and disorganized a condition. It is also remarkable that there has been no threatening of abortion before or since the opera-

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tion. The patient has now completed the eighth month of gestation, and promises to go to the full term.

Bantock has recently reported a case in which he removed both ovaries after gestation had reached the fourth month, and there were no unpleasant results. Such cases prove that pregnancy is not always a bar to laparotomy.

Case III.—Mrs. J. C., white, aged 35, has had four children; youngest 8 years of age; health had been bad for several years, but at the time of my seeing the case she was much better and was pregnant. A close examination made it certain that the pregnancy was extra-uterine. She had had a shock about two weeks before which prostrated her a good deal for a time, but from this she rallied.

On the 15th of April, 1890, laparotomy was done, and the remains of the ectopic gestation was removed. An incision of three and a half inches was made below the umbilicus; afterwards carried to the extent of an inch and a half more to the right iliac region, in which the mass seemed to lay. The cavity was filled with a mass of blood-clots and the remains of amniotic fluid. This was removed, and the site of gestation made out. Conception took place in the lower half of the tube, about equidistant from the centre, and the fimbriated extremity. The whole ovum was thrown out of the tube, with the exception of a portion of what seemed to be remains of the placenta,, which hung loosely in the mouth of the sac. The patient bore the operation well, and when last heard from, promised to make a good recovery.

Case IV.—A mulatto, aged 36; general health has been good since being married; has had six children; never miscarried. There was some distention of the abdomen—more in the right iliac region than elsewhere. Just over the site of the tumor there was much tenderness. Various opinions were given in this case, such as ovarian cyst, solid cyst of the ovary, ectopic gestation, and pelvic abscess. The aspirator and trocar were used, but no fluid was evacuated. An incision below the umbilicus revealed an intra-ligamentary cyst of the broad ligament situated near the right horn of the uterus. The walls of the cyst were so thick—being fully a half inch—that it gave to the touch the sensation of a solid. It was divided into three compartments, and was tightly packed with a thick fluid of a grayish color, commingled with which were white chunks of solid matter, resembling fat bacon. The operation was done on May 5th, and the patient has never had an unfavorable symptom, and promises to make a good recovery.

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Young Eyes.

Dr. Charles W. Kollock, of Charleston, S. C., said that by young eyes he meant to include all eyes from infancy to about the twenty-fifth year, when the human organism has nearly attained its full development. The responsibility of caring for the eyes of the new-born usually rested upon the general practitioner, and it should be his especial care to examine the eyes of every infant immediately after birth, in order, 1st. To ascertain that the organs were present; 2nd. Normal in shape and appearance; and last, that they were in a healthy condition. It is much better that the physician should discover malformation, disease, etc., than that these should first be noticed by the nurse or mother, especially since cases have been known where the physician was accused of having injured the eyes of the infant during delivery. The importance of prompt and untiring treatment of *ophthalmia neonatorum* was dwelt upon, statistics were cited proving the immense destruction of vision by this disease. The different modes of treatment were given, and the preventive methods were earnestly advocated, especially those of Crédé and Hegar Krohn. That physicians were at times to blame for the loss of vision by this disease on account of negligence, was undoubted. The *phlyctænular inflammations* were next taken up. Children with diathesis being most frequently attacked. Constitutional treatment is imperative, and great care should be exercised in order to prevent extension of ulceration, perforation of the cornea, and prolapse of the iris. The great improvement to vision when lessened by opacities, to be derived from massage, was carefully gone over. *Squints* and their treatment were reviewed in full, and the profession were cautioned against too quickly performing tenotomies. Careful examination for refractive errors, always with the eyes under the influence of the mydriatic (preferably atropine), and a thorough testing of the muscular balance of the orbital muscles was insisted upon before tracheotomy was thought of. It now seemed much better treatment to have correcting glasses worn for some time before contemplating the operation, for in many instances, recovery has been good without. Most careful examinations for *refractive errors* were advised in all cases where there was headache, night terrors, ill health, or ocular inflammations. No oculist of the present day ever hesitates to prescribe glasses when necessary for a child as soon as old enough to wear them. *Lid troubles* were treated, and the advice never to begin with

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too strong applications, which in many cases aggravate the disease when improperly used.

The writer concluded by an appeal for higher education for students in ophthalmology. The average recent graduate, (and a goodly number of those who had practised for years), could not distinguish between iritis and conjunctivitis. The student spent too much time in witnessing the major and more complicated (radical cure of hernia) operations of the professor of surgery, which he was rarely called upon to perform, and never as a tyro; whereas, at any time, he might treat iritis for conjunctivitis, and not discover his error until blindness resulted. Ophthalmology is taught in a very slack manner at many of our medical schools. In fact, many of the graduating students cannot so much as use the ophthalmoscope, which by all odds is theg reatest instrument for diagnosis ever invented. Operations are viewed from too great a distance to be of any use, and the student must take the lecturer's word, that the case before them is one of iritis, as he is too far on the benches to see the diagnostic points. It was not meant that students should, or could be made accomplished ophthalmologists, but they should be taught the use of the ophthalmoscope as much as of the stethoscope, and they ought to be able to distinguish iritis from conjunctivitis.

An Intra-Ligamentary Ovarian Cyst Successfully Treated by Iodine Injections.

Dr. R. B. Rhett, Jr., of Charleston, on April 7th, 1889, was called to Mrs. H., white, age 28, who had always suffered some dysmenorrhœa, except from August, 1887 (when she had an attack of typhoid fever) to October 10th, 1888, when she married. During that interval there was no pain or difficulty. For years she has suffered slightly from incontinence of urine.

Immediately subsequent to marriage, the dysmenorrhœa returned and increased in severity; the pains, dragging weights, etc., continued also between these periods. She felt sick and badly all the time, but believed this to be the normal condition of women during early married life.

In January, 1889, she missed her periods. In February, for the first time, she noticed in dressing that her abdomen had become enlarged, as her clothes were too tight, and thought that she had conceived. On February 20th, her menses returned, and continued almost constantly until April 1st, when her physician prescribed medicine which stopped them. On March 8th, she was seized suddenly with

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most violent cramps and retching. She was also unable to void her urine, though constantly attempting to. Her family physician drew off her urine repeatedly, and administered anodynes.

On the 18th, while still confined to her chamber, another attack occurred, similar in every particular, though slightly less in intensity. For some months she has suffered from constipation, and there seemed to be some obstruction in the passage. In 1886, she fell down a flight of stairs. For some time previous, to March 8th, 1889, she was in the daily habit of lifting buckets of water through a window into a room, in doing which, the abdomen was strained against the window-sill and often caused sharp pains.

This fall, or the forcible compression of the abdomen against the sharp edge of the sill, may account for (by having caused hæmorrhage), the color of the fluid in the tumor, which at the operation was found to be brown.

Physical examination revealed the presence of a tumor extending across, and occupying the lower part of the abdomen, from the right inguinal region, just below the anterior superior spine, to just under the twelfth rib. The tumor was hard and tense, and felt like a fibro cyst. It could be plainly felt pressing down on the anterior wall of the vagina, and there gave the sensation of a solid growth. The womb was fixed, deflected to the right and measured four and one-half inches in diameter. The bladder was elongated. An effort, with partial success, was made, to improve the patient's general condition by means of tonics, baths, etc.

About the middle of April, Dr. J. J. Edwards was called into consultation, and agreed with me as to the propriety of operating for the removal of the growth. The diagnosis—an intraligamentary ovarian cyst—was made, and measures for operation were taken accordingly.

On May 1st, the operation was performed. An incision about four inches in length was made, reaching to about two inches below the umbilicus and just below the upper margin of the tumor. The incision was very cautiously deepened until the cyst-wall was reached and recognized. A trocar resembling Dunster's was thrust in near the upper extremity of the incision, and the sac partly evacuated of a brown fluid. The opening was then carefully prolonged through the cyst-wall, downwards. The patient was turned on her side, and the fluid and solid contents of the sac scooped out with the hand, and the cavity was thoroughly washed. The patient was then turned back, and the in-

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cision carried up into the peritoneal cavity. A short coil of intestine was found adherent to the peritoneal surface of the tumor, and was released. Later during the operation, the raw oozing surface of this coil bulged up into the opening, and in checking the hæmorrhage, was grasped with pressure forceps by an assistant, and so bruised by the forceps, as to necessitate the sewing up of about an inch of its surface. An attempt was then made to peel out the tumor; but the hæmorrhage was so terribly profuse, and the constant necessity of stopping to control it so great, that very little progress was made.

The patient was several times during the operation given hypodermic injections of ammonia, and hot battles were kept in constant contact with her person, but she became so weak that death on the table was imminent, hence further efforts to enucleate were abandoned.

The abdominal and tumor cavities were thoroughly cleansed with hot water. The edges of the incised peritoneum were sewed together, closing off the peritoneal cavity completely from that of the tumor. The freed portion of the sac, which was in proportion to what remained very little, was cut off and the edges drawn into apposition with sutures. The wound of the abdominal wall was closed by deep stitches with two drainage tubes in the lower angle—one glass bent at an angle passing into the pelvic cavity, and the other, rubber, seven inches long, pushed into the upper portion of the sac. The cavity after the first twenty-four hours, for two weeks was injected every four hours with bichloride mercury solution, 1 to 10,000 of boiled water, and once daily with about a one-half ounce of tincture of iodine, containing a small quantity of saturated solution of iodide of potash, to prevent the iodine from being precipitated when coming in contact with any water, which may have been left from having just previously washed out the cavity. The iodine was thrown through a long-nozzled syringe, against the upper surfaces, and into the two sulci, one of which was under the twelfth rib, and the other in the right inguinal region. Three hours after each of these injections the cavity was washed out. The syringe used while the tracks were large enough, was one with a bent nozzle, which Emmet recommends for withdrawing mucous discharges from the uterine canal. When the tracks became too small, a malleable silver canula attached to a small aspirating syringe was used. For the first few days a few drops of carbolic acid were added to the tincture of iodine, with the

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idea of producing a slight caustic action. He now, however, believes the quantity was so small that it had no effect.

At no time did the patient complain of much pain deep in the abdomen. The opening and surfaces around it were anointed with vaseline. As the cavities contracted, the tubes were removed, one at the end of three weeks, and the other at the end of five. The injections of the iodine after the second week were, for a short time, given every second day, and then every third, until the tenth week, when the tracks had entirely closed. After the third week the iodine was immediately withdrawn with the injecting syringe, as it was believed that the surfaces were all thoroughly reached, and the tracks were not washed out in three hours. After the eighteenth day the character of the discharge changed, and became a transparent amber colored fluid.

At the end of six weeks the patient was up and has since enjoyed excellent health. There is, at present, no evidence whatsoever of any return of the growth.

Dr. Rhett has searched the limited literature within his reach, and finds no reference to a similar line of treatment. The old treatment of injecting an ovarian cyst cavity with iodine after tapping where the products of inflammation were locked up in the cavity, he regards as different in material points.

The theory upon which this treatment was based was that because of the low vitality and non-malignancy of the structures, that besides its antiseptic and hæmostatic effects, that application of the pure tincture of iodine might, as it does in some pathological conditions of the endometrum, produce disintegration, resolution, and complete absorption of the growth. This effect followed in this instance, but there may have been other factors which accomplished the result. The test of experience alone, however, can prove it. But if time should establish it to be the safest and best treatment, then would we have a simple and easy process substituted for one from which even the boldest and most skilful gynecologists shrink. The appalling hæmorrhage, the dangers of tearing the ureters, the rectum, the bladder, etc., would be removed, and in many cases it would be unnecessary to even enter the peritoneal cavity.

Cataract Cases.

Dr. Charles W. Kollock, of Charleston, reported a second series of nine extractions of cataract in his private practice.

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Eight were successful, and one a total failure, the operation being followed by panophtholmitis, caused probably by an old and incurable conjunctivitis, and perhaps, a scrofulous diathesis. The operations are always performed with the patient in bed. The eye and appendages, as well as the instruments, are carefully cleansed in a bichloride solution 1 to 10,000. Anæsthesia is produced by a 4 per cent. solution of cocaine. The incision is made in the corneo-scleral juncture, and ends in the cornea. Iridectomy is almost invariably performed, as the writer believes the procedure safer in private practice; whereas, when patients are in a hospital or institution, under medical supervision, the performance of iridectomy may be tried, but cannot be safer.

The capsule is usually divided near the periphery, and the speculum is invarably removed before the lens is expelled. This is accomplished by pressure with the finger or spatula through the lower lid, while the upper is raised by the thumb of the other hand. No strenuous efforts are made to expel cortical matter, and no case has been lost by allowing it to remain. After cleansing with the bichloride solution, the eyes are closed with a strip of isinglass plaster, and the patient kept in bed for two or three days according to circumstances. Dr. Kollock does not believe that eye-strain is a particular factor in the causation of cataract. Many of his patients are ignorant negroes, who have never used their eyes for near work, and yet a large percentage have cataracts. Among these, refractive errors are more rare, but among the mulattoes, refractive and accommodation troubles are as frequent as with the whites.

Dr. W. P. Porcher, of Charleston, read an article on

The Origin of Sputa in Sub-Acute Cough.

He endeavored to show that most, if not all, the sputa that was brought up by patients suffering from sub-acute cough resulting from a previous attack of rhinitis, come from the naso-pharyngeal space, instead of the lungs and bronchi, as ordinarily believed, and that the discharge trickled down from above, the patient being, at the same time, unconscious of it, and it was afterwards coughed out in nummulated or other masses. He cited as proof several cases, some of which were of recent date, while others were of a more chronic character, in which application of astringents, and especially strong solutions of nitrate of silver (℥ij–iv to ℥j) to the naso-pharynx and posterior pharyngeal wall had caused a complete cessation of the cough and disappearance of the large quantities of sputa which the

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patients had been bringing up. The Doctor also showed that this was not the old method of treatment recommended by Dr. Green in 1847, because, from an abstract of an article by that gentleman, it was shown that his application had been applied only to the larynx and trachea. He stated that the universal tendency of patients to attribute all sensations to the regio-laryngo-trachealis was entirely a reflex phenomenon. He also alluded to the fact that almost all phthisical patients, excepting such cases where the disease was directly dependent upon an acute inflammation of the lung, or a pleurisy, would ascribe their trouble to a previously catarrhal condition of the nostrils, with frequent colds, profuse discharge of mucus, etc., which gradually ended in a cough; and this latter becoming more severe, the diagnosis of phthisis would be pronounced upon them. He said he regarded a cough as nothing more than a symptom of disease elsewhere, and it was the exception where seat of this disease was not in the naso-pharynx and nostrils, and therefore he drew the conclusion that patients with such coughs should no longer be dosed with nauseating drugs, etc., but should be treated by local applications to the origin of the trouble.

Dr. R. A. Kinloch, of Charleston, presented a paper entitled—

Six Recent Cases of Laparotomy for Removal of Uterine Appendages.

Case 1.—Unmarried; age 47; suffered during entire life from disordered menstruation. Had many attacks of pelvic peritonitis, hysterical manifestations common; and at times, indications of mental derangement. The menopause four years ago induced no relief. Insanity was feared by her brother, a physician, and an operation requested.

Laparotomy July, 1889. Both ovaries presented signs of chronic inflammation, and with tubes were firmly adherent to adjacent structures. Drainage used; convalescence slow because of some suppuration along track of tube, but at this date, patient is in most excellent health.

Case 2.—Married at 14, an invalid ever since; has had three children. Soon after marriage symptoms of ovarian irritation, abdominal pains, backache, bladder troubles, etc. For last two years patient bed-ridden. Laparotomy November, 1889. Right ovary enlarged and cystic, the left exceedingly hard and small. No adhesions; no drainage. Patient's temperature never arose above 101°. Went home in three weeks.

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Case 3.—Married, age 24. Invalid four years bedridden one year. Patient emaciated, has backache, burning feelings in groins and thighs. Examination shows slight unilateral fissure of cervix, relaxed vagina, prolapse of left ovary. Laparotomy December, 1889. Both ovaries enlarged and cystic; tubes large and with cystic development, so that one at first sight suggested tubal pregnancy. Both ovaries and tubes removed; no adhesions, no drainage. Patient recovered promptly, temperature never going above 99.5°. This month she returned, and the cervix was found enlarged and tender. The os externum was split and all indurated tissue removed. Patient has now none of the pelvic or abdominal symptoms, and promises to be restored to health.

Case 4.—Married at 15; age 39. No children at term, but has had fifteen miscarriages; been an invalid ever since married; bed-ridden for two years. Laparotomy December, 1889. Both ovaries and tubes removed. Ovaries were large, cystic and nodular at points. No drainage. Temperature never exceeded 99°. Patient at a very recent date writes, that she can scarcely believe herself the same woman; does all her own housework.

Case 5.—Married, age 36. Sick with ovarian and uterine troubles almost constantly since marriage. Has had repeated attacks of pelvic peritonitis, with long periods of nausea and vomiting, so that rectal alimentation at times was required. Great emaciation, pelvic pains, etc. Laparotomy January, 1890. Both ovaries and tubes bound down by strong adhesions, and with the greatest difficulty detached. One ovary contained a large abscess. Hæmorrrhage, active; drainage; convalesence slow, from long-continued vomiting; purulent collection diagnosed in cul-de-sac, and liberated her vagina with immediate improvement. Was doing well while in city, but after trip home, serious illness occurred, and she is now slowly recovering from that. The journey home seemed to cause recent sickness; menstruates regularly.

Case 6.—Married; never conceived; suffered for three years from ovarian pains. Patient brought to city suffering from great pain in ovarian regions, and over bladder frequent micturition, diarrhœa, emaciation, daily—had lost 38 lbs., febrile movement of 102° to 103°. Prognosis bad. Laparotomy March, 1890. Left ovary cystic, large as a goose egg, firmly adherent. Left tube dilated and full of pus. Right ovary not found. A small cyst seemingly

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springing from fundus of uterus was evacuated and interior scraped. Drainage. Recovery rapid and without untoward symptoms. Patient now in good health and full weight.

After giving these histories, the Doctor described his general management of such operations. He uses a short incision half-way between umbilicus and symphisis. The pedicle is secured with the Staffordshire knot, pure silk being best material for ligature. Only boiled cistern water was used for flushing cavity—this introduced through a glass tube to the bottom of the *cul-de-sac*. Hæmorrhage from adhesions he controls by silk ligatures, or of fine, broad surfaces, by hot water and packing with sponges. The drainage tube is used only when hæmorhage is present from rupture of uterus, and is removed as soon as exudation ceases. The abdominal wound is closed with silk-worm gut, introduced with a long, straight, Hagedorn needle. The dressing is simple—iodoform gauze and cotton; and unless fluids from the drainage tube dampen this, it is not changed for many days. Patient is allowed nothing but an occasional mouthful of hot water for forty-eight hours. Peptonized milk, or chicken water, in small quantities is then allowed. Bowels are moved the third day by enemata or Seidlitz powders. Morphine is the best anodyne, but is not given unless there is great pain and restlessness. Alcoholics generally are avoided as injurious.

Dr. E. F. Darby, of Lynchburg, S. C., read a paper on

Physical Culture.

Flourens asserts that the normal period of the life of man is one hundred years. How comes it, then, that so few attain to this age, and that the alarmingly small average of thirty-three years only is now the measure of existence?

Flourens replies: "With our manners, our passions, our torments, man does not die; he kills himself." In view of these facts, is it not astonishing that physical culture, and the best and surest modes of attaining health and strength, as well as this maximum of human life, do not command the first place?

Light and heat, fresh air and pure water, are indispensable to vegetable existence from the moment of its first appearance above the soil; for without these it must perish. Here, however, its requirements seem to cease; for, under the influence, presuming the soil to be suitable, its mission may be accomplished to the fullest extent. So it is measurably with the animal kingdom also. All these elements

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are part and parcel of its existence, so to speak. As regards man, however, his true development requires more care and caution. Being endowed with the higher attribute of reason, he is called upon to use it to build up his physical structure and establish a true and healthy basis for his metaphysical structure also. The brain sympathizes with the whole system, and is, consequently, affected by derangements of the other organs. A vigorous mind is incompatible with a diseased brain.

The case lies in a nutshell. A long life of health and happiness is utterly unattainable save through the medium of a pleasant and systematic course of physical culture or training, to be observed from early youth to the utmost limits of our declining years. But this system of training must adapt itself to the necessities of the different physiques and natures which so widely characterize all communities; and care must be taken not to confound these different constitutions one with another. Plenty of pure, fresh air, and gentle exercise, a sufficiency of plain, wholesome, and suitable food, the proper quantity of sleep, and a judicious use of the sponge and slightly tepid or not absolutely cold water, are the starting points for the young on the way to health and strength.

During the period of dentition, or for the first ten years, great care must be taken not to overtax the brain or the physical organs. The babe should have an abundance of fresh air, sunlight in mild weather, and when practicable, be permitted to inhale the pure, fresh, country breezes. This, when supplemented by the mother's milk only, will lay the first sure stone in the foundation of future health. Until his bones and muscles begin to assume consistence, he is never to remain too long standing on his feet, as the superincumbent weight of body tends to bow the legs, and thereby destroy the symmetry of the whole body. No child should be entrusted to his legs before he is a year old, and then only for a short time. The voluntary muscles are to be properly trained and kept in constant use, so that they may become fully developed, enlarged and strengthened.

To all of what has been observed, well ventilated residences and bed-rooms must be added, for neither strength, nor health, nor anything pertaining to true comfort can be found in connection with badly ventilated bed-rooms. Consequently, if through some open casement or door there is no mode of escape for it, once it has performed its mission, or no mode of ingress for pure fresh air from without, we

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are while slumbering actually poisoning ourselves by slow degrees. We must, therefore, never shut out the pure, fresh air of heaven, awake or asleep; for it and the bright, warm sunlight, are indispensable to our mental and physical well being—the sun-bath itself being a great promoter of health. Another advantage connected with physical culture of all importance is, a tendency toward temperance as to the use of spirtuous liquors and tobacco. The press and the expeience of thousands bear evidence to this in the countless illustrations presented to us daily. The mind and body appear to go hand in hand. When virtue imbues the one, health and strength appear to wait on the other. It is the order and the way of heaven. Neither soul nor body is ever itself in abnormal conditions. The way is clear before us, and we who would attain the highest standards of perfect man or womanhood, must obey natural laws and conform to them systematically.

The Report on Ophthalmology

Was read by Dr. Geo. Howe, of Columbia, S. C. He stated that there had been no startling discoveries in this department of medicine, but proceeded to make a condensed report of some papers of interest that had been published during the year. First was a paper of Simeon Snell on the *Extraction of Cataract Without Iridectomy.* Snell held that the results were better without iridectomy, but the discussion of his paper, during the meeting it was read, showed that the opinion as to the advisability of this operation was equally divided. Fontan's new view of the *Pathological Anatomy of Keratiti's Punctacæ* was the next subject brought up, the substance of which was that it was not a disease of the tissues of the cornea, but was due to a deposit of fibrin upon the internal surface of Decemet's membrane, secondary to disease of the vascular tunics of the eye. He then spoke of the value of the *ophthalmoscope in Bright's Disease* as an index to the course any given case is taking. The retinal changes occur late in the disease, and indicate an early and unfavorable termination. He next mentioned the many contributions that had been made during the year to the subject of reflex neuroses, dependent upon errors of refraction. The relation subsisting between eye and nose diseases was also alluded to.

A Case of Aneurism and Arterio-Venous Aneurism of the Femoral Artery, Produced by Gunshot Injury—Operation and Recovery.

Was reported by Dr. Manning Simons, of Charleston,

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Professor of Surgery in the Medical College of the State of South Carolina. John F., age 25 years, came from the upper part of the State, and gave the following history: Eleven months ago he received a wound from a pistol ball, fired about one hundred feet away from him—the ball entering a little to the inner side of the median line and at the junction of the upper and middle third of the thigh. Hæmorrhage was not great. In a few weeks a pulsating tumor presented itself in the region of the wound, which had already healed completely. This tumor had a thrill and bruit, pulsation was expansile in its nature, and diminish, or ceased when the blood supply was cut off by pressure on the femoral below Poupart's ligament. These symptoms clearly indicated an aneurism.

Upon examination, Dr. Simons found the tumor at the apex of Scarpa's triangle, about the size of a goose egg, extending downward beneath the sartorious muscle. The thigh had increased in size, and the leg, from the knee down, was twice the size of its fellow of the opposite side; the surface was red and dusky, and covered with an eczematous eruption, having an appearance indicating a deep seated abscess. Operative procedure was decided upon, because the aneurism was increasing in size, and also showed an apparent tendency to thinning of its walls, and the probalility of rupture.

November 23, 1889, he was put upon the table and anæsthetized with chloroform. Antiseptic precautions were taken, Esmarch's bandage and tourniquet applied. An incision, five inches in length, was made along the line of the artery, its centre being over the middle of the tumor. The aneurism was found to be closely adherent to the surrounding tissues, the sartorious muscle having to be dissected away before the whole extent could be reached. The aneurism was developed from the superficial femoral artery, was the size of a large egg, and its sac walls were composed of one or more of the coats of the vessel. An effort was made to tie the vessel above and below the sac, which was found difficult to do, because the vessel and its sheath were so closely connected with each other, and the amalgamation with the neighboring tissues was so great, that it was impossible to define the contour of the vessel and enclose it it with a ligature. Hoping to be better able to define the outline of the vessel, the sac was laid open and a groove director passed into the vessel above and below. Using this as a guide, the aneurism needle was passed, and the vessel

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tied above and below the sac. The cavity contained but little blood clot, and a layer of laminated fibrin. The contents of the sac were turned out

This proceeding developed a complication which could not have been discovered had not the sac been opened. On the posterior wall of the aneurism, a round opening was found with smooth-lipped edges, which would easily admit the tip of the ring finger. This opening was believed, at the time, to communicate with the subjacent femoral vein; whereupon the edges of the opening were pared and brought together with a continuous cat-gut suture. The tourniquet being then removed, a curling stream of blood issued from the opening to the height of two inches or more. A finger was pressed into the opening, and the hæmorrhage temporarily arrested while the question was discussed whether to tie the common femoral below Poupart's ligament, or to deal with the hæmorrhage at the bleeding point. It was decided to follow the latter plan, and the tourniquet was reapplied; the whole sac between the ligatures was then removed with scissors.

It was now discovered that the opening on the posterior wall of the sac communicated with another sac lying between the artery and the vein. This sac communicated also, on the other hand, with the vein. This sac was also removed with scissors. By this operation, the opening in the vein was finally reached, and the vessel was tied on either side of it. The ligatures applied to both artery and vein, were of carbolized silk and cut off close to the knot. The cavity was packed with iodoform gauze, and the wound closed with silk sutures and antiseptically dressed.

The patient complained during the evening of great pain, and tincture of aconite and morphia were given, and his suffering somewhat relieved. From this time there was more or less fever, reaching on the 26th to 101° at 8 A. M., and there was great pain referred to the calf of the leg. The fever, from day to day, presented greater oscillations between morning and evening until December 6th, when it reached 103° in the evening. There were also sweats which indicated fever of an irritative type, probably due to profuse suppuration. The wound of operation being in excellent condition, healing nicely, there was but little suppuration and no pain. The patient all this time referring his suffering to the calf of the leg, an exploratory trocar attached to an aspirator, was introduced deeply in search of the focus of suppuration, but without a successful result.

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On December 14th, the symptoms of irritative fever continuing, the patient was put under chloroform and an extensive incision was made into the calf, the pus cavity was reached, and a half-pint of pus evacuated. Counter openings were made at the same time, and tents of iodoform gauze passed through from one to the other. Notwithstanding the precautions taken to insure free drainage, on December 22nd, the temperature again rose to 103°, a new point of suppuration was discovered higher up in the calf, and the pus evacuated. This was followed by a fall in the temperature. From this time the case advanced steadily to recovery, and the patient is now in the active discharge of his usual avocation.

The following are the officers elected for the ensuing year: *President*—Dr. Thomas P. Bailey, of Georgetown; *First Vice-President*, Dr. E. Miller, Florence; *Second Vice-President*, Dr. P. A. Wilhite, Anderson; *Third Vice-President*—Dr. Thomas McCoy, Laurens; *Recording Secretary*—Dr. W. P. Porcher, Charleston; *Corresponding Secretary*—Dr. O. S. Missildine, Charleston; *Treasurer*—Dr. H. W. DeSaussure, Charleston. The next annual meeting (1891), will be held at Anderson.

Book Notices.

Number One, and How to Take Care of Him. By JOSEPH J. POPE, M. R. C. S, L. S. A., Professor of Hygiene, Birkbeck Institution, etc. Funk & Wagnalls. New York and London. 1889. Paper. 12mo. Pp. 106. Price, 25 cents. (For sale by J. W. Randolph & English, Richmond).

This is one of a "series of popular talks on social and sanitary science" by a capable author. He writes sensibly, pleasantly and instructively. The great lack of such a book is the lack of that very class of readers who could be most benefitted by attentively perusing each page. For instance, if our young ladies could be induced to practice the precepts laid down in the Talk (V) on "Fashion and Figure, or the Mistakes of our Modern Wardrobes," great good would result. The model of beauty, *Venus de Medici*, to a height of 5 feet 3 inches, measures 26 inches around the waist. That statute is taken as perfection. Yet what do dressmakers do about it? They squeeze the waist, and the lady has all sorts of pelvic troubles as the result.

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Let every practitioner help to popularize such a book as this.

Stories of a Country Doctor. By WILLIS P. KING, M. D., Ex-President Missouri State Medical Association, Lecturer on Orthopædic and Clinical Surgery in University Medical College of Kansas City, etc. *With Illustrations by T. A. Fitzgerald.* Kansas City, Mo. Hudson Kimberly Publishing Co. 1890. 8vo. Pp. 397. Cloth. Price, $2.50. (From Robert E. King, General Agent, Kansas City, Mo).

The early chapters give an entertaining account of pioneer life in Missouri, which pave the way to the remainder, which narrates the experience of the author in a practice of over quarter of a century. All of the chapters give many peculiar characteristics of humanity as met with, both in and out of the profession, in the sick and in the well, with funny stories, accidents and incidents, illustrative of these characteristics. The book is profusely illustrated, written in pleasing style, and is full of side-splitting fun from beginning to end. Every practitioner ought to get this book, for it will many a time lighten the burden of weariness, and force a laugh where "frets and fumes" are seeking opportunity for expression.

A New Medical Dictionary. Including all the Words and Phrases used in Medicine, with their proper Pronunciation and Definitions, based on Recent Medical Literature. By GEORGE M. GOULD, B. A., M. D., Ophthalmic Surgeon to the Philadelphia Hospital, etc. With Tables of the Bacilli, Micrococci. Leucomaïnes, Ptomaïnes, etc., of the Arteries, Muscles, Nerves, Ganglia and Plexuses; Mineral Springs of U. S., Vital Statistics, etc. Small octavo, 520 pages. Half Dark Leather, $3.25; Half Morocco, Thumb Index, $4.25. Philadelphia. P. Blakiston, Son & Co. (For sale by West, Johnston & Co., Richmond).

We give title in full so as to let our readers see the great range of this compact, concise vocabulary, which is authoritative, handy in size, convenient for reference, and low in price. It contains several thousand words not contained in any other work of its size until the present year. It is printed upon handsome paper, and is so bound as to lie open at any page. Appendix A covers 34 pages, and gives the Mineral Springs of the United States. But this table omits reference to that most valued of recently analysed waters, the Bowden Lithia Springs of Georgia, the Otterburn Lithia of Virginia, etc. Appendix B is devoted to

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vital statistics. The *Dictionary* includes the new words, etc., created during the past ten years; definitions framed by text-books; and *omits* words that are practically obsolete. Both author and publishers have done their work with great credit to themselves. The work should be always on the office table of the doctor.

Chemical Lecture Notes, Taken from Prof. C. O. Curtman's Lectures at St. Louis College of Pharmacy. By H. M. WHELPLEY, M. D, Ph. G., F. R. M. S., Professor of Microscopy, St. Louis College of Pharmacy, etc. *Third Edition.* With over 100 illustrations. St. Louis, Mo. Published by the Author. 1890. Cloth. Pp. 211. Price, $1.50.

This edition is substantially the same as the second. It serves as an excellent guide in the class-room, but is not exactly the work needed by the physician who is not receiving lectures. For instance, page 83 says, simply, "Various magneto-electric machines used for medicinal purposes." Of course the lecturer fills out, and the class-student learns; but the reader, away from the lecture-room, is left in ignorance as to what forms are described. Again, page 97, says: "Popular prejudices in regard to mineral and other drinking waters." The student is told of them, but the far-away reader is left to guessing. And so it is all through the book. The plan of the lectures is first-rate, but the sentences need a little filling out to make the book what is wanted by the medical practitioner and pharmacist who has not heard the lectures delivered. A student at the St. Louis College of Pharmacy would be much in his own light not to have these Notes as his guide or help.

Electricity in the Diseases of Women. With Special Reference to the Application of Strong Currents. By G. BENTON MASSEY, M. D,, Physician to the Gynecological Department of Howard Hospital, etc *Second Edition—Revised and Enlarged.* Philadelphia and London: F. A. Davis, Publisher. 1890. Cloth. 12mo. Pp. 240. Price, $1.50 net (From Publisher.)

Whatever may have been a former professional opinion, the value of electricity in the treatment of organic diseases cannot be longer doubted. This book, written from the clinical standpoint, most positively settles its value in diseases of women. The advances made, even in two years, has compelled the rewriting of the chapters in the first edition on electrical treatment of uterine fibroids, of uterine

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hæmorrhage, of chronic metritis, and chronic endometritis, and treatment of pelvic pain. The descriptions are so plainly made that even the "country doctor," who familiarizes himself with his electrical battery, can treat his patients successfully. This is a capital work, both for primary instruction and for the practical purposes of the physician. It is one of the Publisher's "Ready Reference" Series.

How to Preserve Health. By LOUIS BARKAN, M. D., Brooklyn, N. Y. American News Company, New York. 1890. Paper. 12mo. Pp. 844. Bound in cloth, $1. (From Author.)

As Dr. Fordyce Barker has written, this is "the most sound, sensible, and useful book" for the laity, from a medical standpoint, that we have seen. It is a book adapted to the education of the people on the subject named in its title, and renders valuable assistance in instructing parties in charge of the sick room. The chapter on emergencies—before the doctor can be got—is first-rate. We wish the laity could be induced to read such scientific books as this. It would do good.

Treatise on Orthopædic Surgery. By EDWARD H. BRADFORD, M. D., Instructor in Clinical Surgery, Harvard Medical School, etc., and ROBERT W. LOVETT, M. D., Surgeon to the Samaritan Hospital, etc. *Illustrated with 789 Wood Engravings.* New York: William Wood & Co. 1890. Cloth. Large 8vo. Pp. 783. (From Publishers.)

This is the third volume of *Specialties* being issued by the enterprizing House of Messrs. Wm. Wood & Co. The authors are well chosen, and the book is well written—as well for the general practitioner as for the specialist. The wood cuts are very serviceable in illustration of the deformities caused by the diseases, and for instruction as to the application of apparatus, etc. The authors take the proper view of their subject in dealing so fully with diseases of the joints; for it is by such diseases generally that deformities result. Some deforming and disabling diseases which oftentimes come to the orthopædic surgeon for advice, are also treated. Dr. Sayre's great pioneer labors have been duly appreciated by the authors in their descriptions of suspension treatment, etc., although improvements on the simple plaster-jacket are now presented and advocated. A very important part of the work consists in instructions as how to recognize the incipient joint diseases, and how to

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treat these incipient stages, for if let alone, they will produce deformities. Every practitioner should have such a book as the one now under notice.

Wood's Medical and Surgical Monographs. Vol. 6. Nos. 1 and 2. *April* and *May*, 1890. Published monthly at $10 a year. Single copy, $1. 8vo. Pp. 291-352. Wm. Wood & Co., Publishers. New York.

The April number contains the following first-rate monographs: *The Human Foot—Its Form and Structure, Functions, and Clothing*, by Thomas S. Ellis, M. R. C. S. (p. 103); *Modern Cremation—Its History and Practice*, by Sir H. Thompson, F. R. C. S., M. A., etc. (p. 30); *Aphasia—A Contribution to the Subject of the Dissolution of Speech from Cerebral Disease*, by James Ross, M. D., LL. D. (p. 153).

This May number contains the following excellent monographs: *Insanity at the Puerperal, Climacteric, and Lactational Periods*, by William Bevan Lewis, L. R. C. P. (p. 53); *Treatment of Diseases of Women by Massage*, by Dr. Robt. Ziegenspeck, of Munich (p. 56); *Treatment of Internal Derangements of the Knee-Joint by Operation*, by Herbert Wm. Allingham, F. R. C. P. (p. 92); *Idiopathic Enlargements of the Heart*, by Dr. Oscar Frœntzel (p. 140). These *Monographs* stand always as recommended unless, perchance, we are yet to find one when our opinion would be plainly stated.

Editorial.

Medical Society of Virginia.

The Twenty first Annual Session of this Society will be held at Rockbridge Alum Springs, Va., September 2nd, 3rd and 4th, 1890. Dr. J. Edgar Chancellor, of University of Virginia (but who will be the Resident Physician at Rockbridge Alum Springs this summer season) is Chairman of the Local Committee of Arrangements. The Preliminary Circular will be issued by the Secretary (Dr. Landon B. Edwards, Richmond, Va.,) about July 1st. All regular State Medical and Pharmaceutical Societies are requested to send Fraternal Delegates. Fellows of the Society, who wish their distinguished friends of other States to be invited to attend, should at once write a note to that effect to the Secretary of the Society, in order that invitations may be issued in due form.

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The Recent Session of American Medical Association

In Nashville, Tenn., seems to have been a great success; at least nothing that an active and experienced Committee of Arrangements could do to make it a success was lacking. Our regret is that we have no space left us to make a fuller note of the meeting. Dr. Wm. T. Briggs, of Nashville, Tenn., was elected President for the ensuing year, and Washington, D. C., was chosen as the place of meeting during May, 1891. We are sorry that so few Southerners were in attendance at Nashville. For instance, only one (Dr. J. Edgar Chancellor, of University of Virginia) was present from Virginia. The Spring is an unfavorable time for Southerners to leave their homes. As everybody takes vacation during the summer months, why not let some of the meetings take place at some pleasant summer resort during July or August?

(Miss) C. L. Haynes, M. D.,

Who has become quite conspicuous in the eyes of the profession of Virginia, because of the dangerous incaution of some friends in electing her to a medical position in Virginia before she had passed examination before the Virginia Board of Medical Examiners, stood an excellent examination before the State Board in April, and at once assumed the discharge of her duties as Assistant Physician at the Western [Va.] Lunatic Asylum. Dr. Haynes bears the distinction of being the first graduated female physician in Virginia who has passed the Medical Examining Board of Virginia, and is, we believe, the only graduated female practitioner in Virginia at this time. But others are coming, and it is just as well for the Medical Society of Virginia now to make provision for their membership as later.

Secret or Proprietary Articles in Arkansas.

The State Medical Society of Arkansas, in its Circular of Announcement of the Fifteenth Annual Session at Little Rock, Ark., May 14th, states that "the Committee of Arrangements was instructed to prohibit, in the future, the exhibition of secret or proprietary articles in connection with the meetings of this Society."

Although this June Number Contains More Pages

Than usual, we are compelled to lay aside Analyses, Selections, etc., that had been prepared for it, and our Editorial Notes have also to be abbreviated.

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Bowden Lithia Springs, Ga.

Dr. T. D. Crothers says in the *Quarterly Journal of Inebriety*, April, 1890: Theoretically a natural combination of the bromides with lithia and the iodides would be a remedy of great value in a large number of cases. Practically, it has more than fulfilled these expectations, and although this water has been very recently introduced, there are many reasons for supposing that it will become the most widely used of any medicnial water known. Our personal experience in three cases of Alcoholic Rheumatism and Neuralgias is very satisfactory so far. This Bromide Spring of Georgia may become the great resort of neurotics of all kinds. It is perfectly clear that, under any circumstances, this water will become a popular remedy, and these Springs a famous resort in the near future.

The May Editorial About Medical Treatment at Andersonville

Has brought in a flood of letters which the editor cannot find time to reply to in person. A pleasing feature of every one is that Northern, Western and Southern correspondents agree in the belief that the best that could have been done, under the circumstances, was done, and that politicians alone are disturbing a sore which would long ago have been healed if let alone. We are especially thankful to Dr. Joseph Jones, of New Orleans, La., for a copy of correspondences by him in 1867 with Gen'l R. E. Lee, and in 1876 with Senator B. H. Hill, on the "Relations of the Confederate Government to Federal Prisoners."

Personal.

Dr. Chas. LeBaron, the efficient Secretary of the Mobile County, (Ala.) Medical Society, leaves this month for Fort Gibson, Mississippi. The Doctor will make it his future home, having associated himself with Dr. Anderson, who command sa large and paying practice. We wish him success in his new field.

Dr. E. L. Marshall was unanimously elected to the vacancy created by Dr. LeBaron's resignation.

Honor to Dr. Robert Battey.

The Jefferson Medical College, of Philadelphia, Pa., has just conferred the degree of LL. D., upon Dr. Robert Battey, of Rome, Ga. He is justly entitled to all the honors which the professional world can give him, as being the pioneer in blazing the way to so many successful operations that prolong life or restore health.

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The Improved Clark Chair,

Manufactured by Messrs. Roberts & Allison, of Indianapolis, Ind., is a very excellent one for office, gynecological and surgical, and, with the "head-rest attachment," for ophthalmological work. The cut in the advertisement of it gives a good idea of its appearance without the head-rest. Our opinion of its merits is shown by the fact that we ordered one for office-work, and are much pleased with it.

Postponement of Session of Louisiana State Medical Society.

The President, after due deliberation and consultation. has deemed it best to postpone the meeting of the Louisiana State Medical Society until further notice. But the Committee on State Medicine and Legislation will endeavor to have several bills passed by the Legislature. An official notice, dated May 20, was distributed by P. B. McCutchon, M. D., of New Orleans, La , Recording Secretary.

Changes in Medico-Chirurgical College Faculty.

The following changes have been made in this Faculty: Dr. J. M. Anders transferred from Diseases of Children to Clinical Medicine; Dr. Ernest Laplace has been made Professor of Pathology and Clinical Surgery; and Dr. Samuel Wolfe, Professor of Physiology.

Obituary Record.

Dr. Brodie H. Herndon

Died suddenly at his home in Fredericksburg, Va., May 27, 1890, aged about 53 years. He had been subject for some years to attacks of cardiac asthma. Dr. Brodie joined the Medical Society of Virginia during its Session, 1885, and remained a Fellow till his death. His was a sociable disposition, and his popularity among the young was very great. His bad health had compelled him to lighten the burden of practice sometime before death.

Dr. William H. Byfod,

Of Chicago, Ill., died suddenly from heart disease at his home, May 21, 1890, aged about 72 years. A good man and a great gynæcologist is gone; but the record of his professional life is so rich in suggestion and progression, that, though dead,his works will follow him for generations. His book on *Diseases of Women* is one of the most practical and serviceable published.

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VIRGINIA
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RICHMOND, JULY, 1890.

Original Communications.

ART. I.—Neuropathic States Involving the Question of Doubt.*

By IRVING C. ROSSE, A. M., M. D., F. R. G. S., of Washington, D. C.

PROFESSOR OF NERVOUS DISEASES, GEORGETOWN UNIVERSITY; MEMBER OF AMERICAN NEUROLOGICAL ASSOCIATION, ETC.

The object of these remarks is to call attention to several problematical conditions that I shall try to set forth in the following psychiatric records.

Of the highest importance are cases of *aphasia involving the question of responsibility.* Indeed, it is doubtful whether the intellect is not injured in all cases of aphasia. On one hand, it is argued that intelligence is preserved in all such cases, because a certain number of aphasics show, by facial movements, gesture, and pantomime, or, in other words, by gesticulatory language, that they are still capable of understanding articulate language; on the other hand, alterations of intelligence are advanced as the most prominent and distinctive characteristic of the aphasic condition.

*From a paper read before the Medical Society of the District of Columbia.

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The mental disorders that are more or less constant in aphasics may be regarded from several points of view, according as the intelligence is slightly affected, manifestly altered, or totally abolished, as in dementia.

In a general manner, we can approximate to the mental state of aphasics by assimilating them in this relation to ordinary hemiplegics without trouble of speech. Both have the same pathognomonic causes, the same cerebral lesions that produce sometimes aphasia, sometimes hemiplegia, and sometimes the two symptoms together; and the same intellectual and moral manifestations are observed in hemiplegia as in aphasia. When the imperfections of language persist from the outset without amendment, we must believe that they are dependent on a grave cerebral lesion, and consequently that there exists a profound intellectual trouble.

This condition is exemplified in the case of aphasia seen by me on June 2, 1885.

It occurred in an Englishman of 23 years. Two other physicians who had seen the case were inclined to look upon it as one of malingering, since it was to the man's advantage, for certain pecuniary reasons, to magnify his disability. The patient was unable to speak; but indicated by signs that he had pains and tremors in his right side, and showed me a number of newspaper clippings which mentioned his case as a curiosity at one of the New York clinics. He was fresh colored, apparently well nourished, and there was nothing abnormal about pulse, temperature, or respiration. Muscles firm, limbs symmetrical, and no appreciable difference in temperature of either side. Walks with difficulty. Writes with right hand, and uses it with tolerable facility in dressing and undressing. Intellect seemingly not much impaired, and though aphasic, he makes audible but inarticulate replies to questions.

As this man had been a soldier in the regular army, I ascertained from the records of the Surgeon-General's Office that a year previously, in one of the Western States, he had suffered from what was called "apoplexy and paralytic stroke," for which he was discharged from the service.

I saw this man again February 18th, 1886, at which time both the aphasia and agraphia had increased; he was unable to express himself, either verbally or by writing, ex-

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cept to a limited degree. Amimia was not very marked, as he could communicate by gesture to some extent, and gave me to understand that he could no longer write with the right hand, that he is deaf in right ear, and cannot see well with the eye of that side.

He replied by writing with the left hand short but barely intelligible answers to several questions, and did not speak beyond saying "No." Is still well nourished; no diminution of muscular volume in right half of body, which is hemiplegic. Vaso-motor disturbance and mental impairment also noted. Since patient could make no statement, it was difficult to ascertain with certainty the condition of his sight and hearing. The vision for left eye appeared to be 1; that of right $\frac{1}{150}$. Hypermetropic astigmatism of the latter, but no positive evidence of atrophy of optic nerve. Hearing, right ear $\frac{0}{48}$. Tympanic membrane normal in position and color. Left ear, hearing $\frac{20}{48}$, and membrane same as in right. Deafness probably owing to lesion of portio mollis.

A third examination, September 29th, 1886, showed the patient's condition in every way worse. He was unable to communicate his condition except by imperfect signs; from one hundred and fifty his weight had decreased to one hundred and thirty pounds, and enfeeblement of the intellect was more marked. The otoscopic signs were those previously noted. Ophthalmological examination showed impaired vision with incipient atrophy of the optic disc.

Subsequently to this, it came to my knowledge that the patient had stabbed a man in the abdomen, for which offense he was put in jail, and several physicians were called in to give an opinion as to the sanity of the accused.

Where a question of this nature is mooted the physician's province and responsibility, it seems to me, should be confined entirely to forming an estimate of the intellectual state.

The means of judging of the intelligence are by the gesture, writing, speech, and the testimony of patients after their recovery; by the incoherence, whether verbal, written, or gesticulatory, with or without consciousness of the patient. Impairment of the gesticulatory speech, which may be as much disordered as other modes of language, is usually indicative of grave and complicated derangement of the numerous functions concerned in the evolution of thought;

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and loss or perversion of speech is always a concomitant of other cerebral affections. Of the temporary aphasics who have made analyses of their intellect the one oftenest quoted is Lordat, who, by the way, was a spiritualist of the worst kind before becoming aphasic, and gave other evidence of mental distraction. Besides, the history of his case shows that his mind was considerably injured after recovery.

Doubtless many aphasics may read mentally when they are unable to do so phonetically; they may think without words; they may be speechless but not wordless; and they may have ideas without the necessary means to communicate them in any outward manner that admits of their being properly constructed or interpreted; but everything goes to show that aphasia is a trouble essentially intellectual, and that the intelligence, considered in a general manner, sustains an injury more or less profound in all cases of true aphasia. So confident is Legrand du Saulle of the injury to the intelligence in aphasia that he formulates his belief by saying that the intervention of the physician is claimed in all cases of accusation directed against aphasic persons.

We therefore feel convinced that in a certain number of cases the patients cannot be considered as sane of mind in a medico-legal point of view; and the necessity for intervention of the medical legist in case of crime or misdemeanor committed by an aphasic does not admit of a doubt. Unhappily, in the present state of our knowledge of the subject, it seems almost impossible to formulate clear and explicit rules for guidance on this point. It is to be wished, however, that with the advance of science we may some day be able to analyze and to point out with more precision the exact nature of the lesion causing the suppression of the natural relations that exist between thought and its representative signs.*

Another condition that I have lately observed, in which deviation of the intelligence was at first difficult to detect,

*See writer's article, "Aphasia, Agraphia, and Amimia," in Buck's Reference Handbook of the Medical Sciences.

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occurred in two cases of *paranoia where the idea of persecution was tinctured*, or rather dominated, by negro *vaudoism*—a form of survival which enters as a factor in certain borderland psychiatric states observed among persons whose surroundings have brought them much in contact with the black race.

A late instance that I may name in connection with the subject was a middle-aged woman whom I was requested to see by the President of our Association, Dr. J. O. Stanton.

Her history was that of domestic infelicity, intemperance, and the opium habit. She had escaped from a hospital in the dead of night, and was afterwards arrested drunk and taken to a police station. It was therefore a friendly motive that prompted her seclusion and treatment; but several physicians hesitated to pronounce her insane, since they were met with uncommon shrewdness on all points at the examination, and could not find her mental weak spot. After a few minutes conversation, I discovered that she had hallucination of smell, and by a little tact I led up to the chief delusion, when she completely broke down after narrating the persecution she had suffered from the spell cast upon her by a negro woman. This patient is now in an asylum.

The next case, in which a delusion of the foregoing character went for some time unnoticed, occurred in a single woman of 32, whom I was called by Prof. Taber Johnson to see in consultation at his Sanatorium. The patient was a living nosological table. At her home in Florida she had been dosed heroically with calomel and quinine for "malaria," and on reaching Washington had undergone a course at Dr. Hammond's, where bromides, hypnotism, and other things had been tried. During the seven weeks that she was under my treatment, I noted hystero-catalepsy with melancholia, beatific visions, and occasional insomnia. There was no appreciable uterine trouble; the eye-grounds were normal; appetite fair; bowels regular, and she seemed so intelligent that I hesitated to declare her insane, until a few days ago, when, despairing of her condition, she told me the whole story of her persecution and ill health, which she alleged had been caused by the evil spell cast on her a few years since by a negro man. She supplemented her own case by narrating a number of others that she knew of.

In studying the prodromal symptoms of psychical im-

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pairment, one seldom meets with a more curious condition than filth, dread or mania of contamination, the so-called *mysophobia or rupophobia.*

A case that has lately come under my observation occurred in a boy of 19, whose father came to my office before I had seen the patient; and in telling what he had noticed as peculiar in his son, unwittingly gave a very good clinical history of the affection. This boy had developed the utmost horror of becoming contaminated. The fear of defilement extended to nearly all his surroundings both at home and in the street, and it needed constant assurances, with the exercise of much parental firmness, to relieve his mind. Aside from touching ordinary objects, after which he subjected his hands to innumerable washings, the fear of pollution extended more particularly to greenbacks, and to using the water-closet, which he did with great reluctance, after covering the seat with clean towels, and would in no circumstance touch the handle that flushed the bowl. He had a morbid fear of having his hair touched, a dread of shaking hands, of coming in contact or running against any one in the street, and an unclean or badly-dressed person caused such loathing that he would cross to the opposite side.

On examination, I could find no appreciable somatic cause for the condition in question. There was perfect integrity of perceptive aptitude, acoustic, tactile, and visual stimuli, and the patient talked intelligently of what he considered exaggerated peculiarities that he was unable to control by his will.

Whether this morbid fear of contact be only an anomaly of the sensibility and instinct, or an undeveloped paranoia, I am unable to say. The psychopathic symptoms mentioned in this and the foregoing cases do not belong to the full-bloom variety. They occupy a sort of neutral ground that is neither Spain nor Gibraltar, and being of the highest import, both from a clinical and judicial point of view, merit further observation and study.

1732 *H Street, N. W.*

In a case of acute neuralgic headache I used Peacock's Bromides with complete success, and find it the best nerve sedative prepared.—F. F. HENWOOD, M. D., Thompson, Pa.

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Art. II.—Epulis, with Report of Five Cases.

By W. B. ROGERS, M. D., of Memphis, Tenn.

Professor Principles and Practice of Surgery and Clinical Surgery, in Memphis Hospital Medical College.

The term epulis signifies a growth or excrescence upon the gum. Any growth, then, coming from or resting upon the gum, would come literally within the scope of this term. Fortunately, however, there are but few affections of the gum liable to be confounded with that particular class of tumors to which the concensus of surgical authority has restricted the term epulis—a solid tumor springing, not from the gum, but from below the gum, from the alveolar, and usually from the periosteal lining of the socket of a tooth.

In a detailed description of the diseases of the superior maxilla, Gross omits mention of epulis, though he describes it at length in affections of the lower jaw. I am firmly impressed with the idea of having seen in some surgical work a statement that the lower jaw is exempt from the disease. Again, it is estimated that two cases occur in the superior to one in the inferior maxilla. It has, however, been my fortune to meet with, in both superior and inferior maxillas, well-marked epulis.

Epulis is a solid tumor, varying in size from a pea to a hen egg, firm and fibrous to the touch—usually appears between two of the teeth, which are gradually raised and separated from each other by the red, smooth, glistening growth. The tumor is more or less constricted at its junction with the gum in some instances, and again has a broad base; it expands, grows laterally as well as grows from the gum. It is painless to manipulation, but soon interferes with mastication; and while the surface is unirritated, the mucous membrane has the appearance of health, though if frequently impinged on by the teeth of the opposing maxilla, it becomes abraded, and even ulcerates and bleeds.

The tumor expanding at its base separates the wall of the tooth socket; destroys the alveolar by absorption, and even

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burrows down into and expands the bone, on which the alveolar is situated, to a shell. The teeth are loosened. But it is astonishing the minimum degree of pain experienced during the destruction in some cases of a considerable amount of osseous tissue.

Early adult age seems most prolific in the type of tumors to which epulis belongs, but of the few cases that have come under my observation, the ages ranged from thirty to fifty-two years—the oldest subject being the only one which has thus far succumbed to the disease, and he, though seen shortly after the appearance of the tumor, declined any operative interference.

Diagnosis.—There should be little if any difficulty in determining between an epulis and other affections of the gum as is any other tumor from hypertrophy elsewhere located. The non-cystic nature can readily be determined by the exploring hypodermic syringe needle. A polyp sometimes occurs on the mucous membrane, but it will have no deeper attachment, while the epulis is a fibrous type of tumor connected with the periosteal covering of the bone. Vascular and warty growths need not be considered in a differential diagnosis. Seen in its infancy, epulis is distinct, and even when far advanced and ulcerating, does not resemble epithelial cancer.

Cause.—As far as my researches go in the literature on this subject, there seems to be a uniformity of belief that this growth is due to the irritation caused by diseased teeth. Salter even alleges that in cases where the tumor appears on an odontulous gum, it will be found that though the teeth have been extracted, there has been left behind a carious root.

It may not be uninteresting to note the difference of opinion as to the clinical import, and consequently in the difference in operative treatment advised. Salter, in his article in Holmes' System of Surgery, and with whom Holmes' recent edition of *Principles and Practice of Surgery*, agrees *in toto*, broadly asserts that epulis is non-malignant from beginning to end; claims that in young, newly-formed

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epulis it is only necessary to remove the offending tooth—the one next, or maybe one on either side of the growth, and then with the knife excise the epulis, and a cure results. He emphasizes the point that the epulis is dependent on the existence of the alveolar, and the removal of the teeth is followed by atrophy of the alveolar, which is as effective as when removed by the surgeon. In the cases of longer standing, where the growth has spread along the alveolar evenly down to the bone proper, then excision of a segment of the alveolar, and may be, bone on which alveolar rests, effects a cure. This teaching does not agree with any one of my cases of a small epulis, in which I removed the two together with a segment of alveolar, well down to the body of the bone, only to see the growth return at same site within a year. Opposed to Salter and Holmes, we find Gross, Erichsen, Billroth, Cornil and Ranvier, Hamilton, and the mass of writers teaching that epulis is a recurring tumor, tending to destroy life. They strenuously urge the necessity for thoroughly dealing with the site of origin of the growth—excision of the alveolar together with the epulis, going well into uninvaded tissues, even at the sacrifice of the body of the bone whenever indicated.

Strange to say, those writers who dwell on the non-malignant tendency of epulis, all consent to the same histological characters as are claimed for it by those of opposing creeds. And it seems to be definitely settled that epulis belongs to the sarcomatous group. Sarcomata as a whole have a strong tendency to recurrence on removal. Every tumor containing embryonic elements is looked upon with suspicion.

The alveolar sarcoma stands second only to carcinoma in its tendency to destroy life, while the giant-celled, or myeloid sarcoma, is the least malignant of the group; to the latter class belongs epulis, which is composed of fibrous tissue and myeloid cells, the former predominating, and it would appear occasionally existing almost to the exclusion of the latter, and again *vice versa*. The greater the preponderance of myeloid cells, the greater the tendency to malig-

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nancy. Histologically considered, epulis is a recurring malignant tumor—a sarcoma. Clinically, early removal means a cure. When neglected, the tendency is to destroy life. I beg leave to report four cases and mention a fifth one.

Case I.—Clara P., female, black, 32 years of age, presented at my clinic March, 1882, with a tumor about the size of a large chestnut, springing from the alveolar of the left superior maxilla, between the lateral incisor and canine,

both of which teeth were loosened from their sockets and displaced laterally. The mucous membrane was smooth, tense, and healthy looking, and had never shown any ten-

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dency to bleed. The tumor was rather pediculated; of firm consistence, painless to manipulation, and as far as could be judged, found its origin below the mucous membrane.

The lateral incisor, although showing no signs of decay, had been the site of considerable pain twelve months previous to appearance of the tumor, which dated about six months prior to the examination. The growth of the mass had not been rapid, but was quite in the way of closing the teeth. The diagnosis of epulis was made, and with bone pliers a section of the entire depth of the alveolar was removed, going wide of the seat of the pedicle or base of the tumor on each side. It was believed that healthy, uninvaded bone was cut through with the pliers. Hemorrhage was considerable, and the actual cautery used to check it.

The parts soon healed, but scarcely had twelve months passed when the growth re-appeared at its former site. Though repeatedly urged to return, the patient delayed until July, 1887, when she presented herself, as seen below.

The growth had by this time every appearance of malignancy. Repeated hæmorrhages, great pain, a foul-smelling, ulcerated more or less, cauliflower-like mass filled the left half of buccal cavity. No glandular involvement. I explained to her the improbability of successful and complete removal of the mass, but she insisted so on even temporary relief that I yielded, and assisted by Drs. Krauss, DePass, and Henning, I removed the superior maxilla, found the antrum filled up with the growth, which was very encephaloid in appearance. Sir Wm. Ferguson's operation was performed. The incision closed with silk-gut suture; the union was good, and when last heard from, one year after operation, parts had healed kindly, patient in good health, and had taken unto herself another husband.

Case II.—J. M. Morehead, male, white, 21 years of age, was brought to me by Dr. Wooley, of Mississippi, in March, 1888, with a tumor situated in right half of body of the inferior maxilla. The growth was the size of a goose egg, was covered by mucous membrane which showed no tendency to ulceration. It was firm and fibrous to the touch, and painless to manipulation. The long axis of the tumor corresponded with that of the bone on which it grew, and examination showed the body of the bone expanded to a diameter of 1¼ inch. The tumor, evidently growing from within, had separated the two plates. The two posterior grinders were present, but situated to the inner side of the

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tumor. Mastication was not seriously interfered with, because of the tumor projecting mostly towards the buccinator muscle. There was no loss of flesh or strength, no glandular involvement. This tumor had been in existence about two years; had sprung up beside the root of the first bicuspid, which had been broken off in attempts at extraction one year before, for toothache, which had extended over a period of six months.

The growth was diagnosed epulis, and on the following day, assisted by Drs. Wooley, Talbot and Williford, I removed a section of the inferior maxilla extending from the canine to, and including the lower half inch of the ramus. The incision through the soft parts extended along the line of the body and ramus of the bone. The wound was closed

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with silk-worm gut except at centre, which was left open and packed with gauze for drainage. A rapid healing took place, and the patient left home on the tenth day. A letter just received says, no return of the growth. The section of bone has been replaced by fibrous tissue, so that he masticates well. The scar is hardly perceptible.

The gross appearance of the mass on section, was that of fibrous tissue, the general direction of its fibres being apparent to the naked eye. To the cut and feel, it was a typical fibrous mass. The two plates of the body of the bone were widely separated and considerably diminished in thickness, by reason of the pressure exerted by the growth. The tumor had not grown forward any from the point at which it originated, behind the root of the first bicuspid, but had developed back to the posterior extremity of the body, and had slightly invaded or inserted itself between the plates of the ramus (selecting the cancellous portion of the bone, and only displacing the compact tissue); but there is little if any room for doubting the nature of the growth—a fibroid epulis.

CASE III.—May, 1875, Mrs. Annie M., white, 29 years of age, presented a small fibroid feeling growth, of six months duration, springing from site of right upper dens sapiens, which had been removed because of its giving trouble. The growth was small, not sensitive, and only a source of slight annoyance. Diagnosis, epulis. Operation included entire thickness of alveola. Nearly five years have elapsed with no return of the growth.

CASE IV.—Harriet Jackson, female, colored, 27 years of age, was sent to my clinic by Dr. N. F. Ranies, in February, 1890. Her general health was excellent, previous history negative, further than the usual toothache, at site where now presented a small, smooth, firm, pear-shaped growth, between the incisor teeth of inferior maxilla to right of median line; both teeth were raised, separated from each other, and loosened by the tumor, which evidently had a deep origin. There was no pain, slight tenderness, no glandular involvement, mastication greatly interfered with by the tumor, size of which equalled an ordinary chestnut. Diagnosis of epulis was made, chloroform was administered, and the growth with alveola, including tumor, canine, and four incisor teeth, were removed quite down to the body of the bone. Hæmorrhage was slight; patient returned to house that evening. Sufficient time has not elapsed to speak of the permanency of the result. Letter from Doctor says, now doing nicely.

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ART. IV.—**Feeding in the Wasting Diseases.***

By EPHRAIM CUTTER, A. M., LL. D., M. D.,
And JOHN ASHBURTON CUTTER, M. D., B. Sc., of New York City.

[CONTINUED FROM PAGE 202, JUNE No., 1890.]

SECOND SECTION.—*The Fatty and Fibroid Degenerations.*

I. Bright's disease, twenty cases.
II. Fibroid tumors, eighteen cases.
III. Cancer, twelve cases.

I. Bright's disease, twenty cases.

We do not consider any case full-fledged Bright's disease unless there are in the urine albumin, casts and fatty epithelia.

We are continually getting cases which may have any one or two of these three signs; such cases are hovering on the border-line of health and well-marked disease, and are very amenable to treatment. Such wavering from health would oftener be detected if physicians would make more thorough examinations of the urine; taking six specimens from six consecutive days, it is wonderful to see the variance from day to day.

Cases that would have been diagnosticated earlier if they had been more fully examined.

I. 1883. Woman, 30 years; called tuberculosis; blood normal; urine albuminous and contained casts of fatty epithelia; sputum copious. Bright's disease lungs and kidneys; not treated. The urine had not been examined before in this case.

II. Man, aged 50; 1885; Bright's and diabetes; disease had not been detected; treatment of no avail; too late.

III. 1885. March. Called nervous prostration by a homœopath. When urine was examined later by senior writer, disease found to be Bright's; treatment by her cousin of no avail, though a Harvard graduate and thoroughly equipped; again too late.

DEATHS.

IV. The late Dr. Elsberg; Bright's disease of lungs and kidneys; great improvement; death on resumption of old modes of life.

V. Bright's disease of kidneys and lungs; improvement;

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death from handling his own case, thus eating wrongly, overworking and allowing himself to be poisoned by sewer gas.

VI. March, 1889. Woman, aged 50; Bright's disease, lungs and kidneys; death (September) from pneumonia; disease somewhat arrested.

VII. Bright's disease of kidneys; 1885; man, aged 50; convulsions like that of a puerpera; chloroform to neck; urine cleared up by diet; took cold from riding in open carriage; death from bronchitis.

VIII. Man, aged 50; October, 1885; Bright's disease of kidneys; nearly blind; case improved; very nervous; services discharged; death in a few months.

IN PROGRESS.

IX. Man, aged 60; 1886; Bright's disease of kidneys; great amelioration of pains and improvement of urine; April, 1890, disease returning, and will probably die if work is not given up, at which he labors constantly.

X. Woman, aged 40; 1883; Bright's disease of kidneys; no improvement till she came into our family; then followed diet, and urine cleared up; disease has returned, though alive in April, 1890; not on treatment.

Cases cured—that is, that are well April, 1890, *with kidneys acting rightly.*

XI. Man, aged 48; January, 1886; Bright's disease of kidneys, cirrhosis of liver and enlarged heart; considered absolutely hopeless.

[*Note.*—The result is understood to be according to the reading of the heading.]

XII. 1880. Acute fatty degeneration of kidneys, placenta and cerebral blood vessels; has since borne two more children.

XIII. Woman, aged 35; October, 1885; not as serious as some of the cases

XIV. Woman, aged 25; 1886; unusual large number of casts and fatty epithelia in urine.

XV. Woman, middle-aged; 1877; had decided to transfuse blood; well in April, 1886.

XVI. 1879. Man, aged 60.

XVII. 1881. Man, aged 60.

XVIII. 1884. Man, aged 24.

XIX. Girl, aged 13; 1884; scarlatina; menses appeared when eruption was at its height; two years to get well.

XX. 1886. Woman, aged 46; fibrous consumption, Bright's

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disease of kidneys and small fibroid tumor of womb; tumor gone; cough gone; urine normal; April, 1880.

II. Fibroid tumors, eighteen cases.

Tumors held in statu quo.

Three cases. The first: Immense abdominal fibroid; woman, aged 60; shall soon apply galvanism by deep abdominal puncture.

Second—Small tumor; would go away probably if woman would allow herself to rest.

Third—Large abdominal tumor, which did not diminish till galvanism was applied by abdominal puncture, though diet helped her very much.

Tumors reduced and patients made comfortable.

Five cases. All uterine; four, large tumors; the fifth, smaller and back of uterus; all greatly improved; tumors arrested and reduced. These would be called a cure if done by the Apostoli method of giving galvanism (which method, by the way, was employed by the senior writer in his first operation, in 1871.)

Tumors that disappeared.

Ten cases. Seven, uterine fibroids; four, large abdominal tumors; three cases of smaller abdominal and pelvic tumors.

One case of tumor of the breast; one of fibroid of the stomach; one of tumor of the neck, which might be called tuberculous.

III. Cancer cases, twelve.

I. Cancer of the face, so-called by eminent men in the American Medical Association at the Philadelphia meeting, 1847. Treatment by knife and caustic had only made disease return and sore more ugly; diet of bread and milk removed tumor and healed sore.

II. Tumor of scapula as large as a pint bowl. In the practice of the late Dr. Amos Twitchell, case I of this series; diet of bread, and an infusion of water dock; disappearance of tumor.

III. Attendant, Dr. E. Cutter; woman, aged 40; uncle dead of cancer; her case, cancer of womb; disappearance of growths by rigid diet of beef.

IV. Dr. E. Cutter, attendant; woman, aged 50; cervix enlarged laterally to sides of pelvis; rough and bleeding; opium eater; rigid diet; iodoform locally; great improvement; death on discontinuance of treatment and resumption of opium.

V. Dr. E. Cutter, consultant; cancer of carpal bones and axillary glands; 1882; said to be hopeless by attending

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physicians; amputation at middle third of forearm; animal food diet; alive, 1890; disease in axilla quiescent.

VI. Dr. E. Cutter, attendant; woman, aged 35; cancer of womb; improvement and arrest of disease; discontinuance of treatment; death.

VII. Woman; attendant, Dr. E. Cutter; sister case VI.; knobbed enlargements of os and cervix uteri; strict diet; disappearance of tumors; alive eight years later.

VIII. Dr. E. Cutter, attendant; cancer of womb; discharged from hospital to die of that disease, 1882; reduction and disappearance of disease by diet; well, April, 1890.

IX. Attendant, Dr. E. Cutter; woman, aged 30; four tumors back of womb; valvular disease heart; tumors disappeared by rigid diet of beef; this in 1876; woman alive and well in April, 1890; her father had died of cancer of stomach.

(For full account of these nine preceding cases, see *Albany Medical Annals*, July and August, 1887.)

X. Attendant, Dr. E. Cutter; disease in both breasts; tumors diminished in size by diet; caught cold from exposure; pleurisy; cancer cells found in fluid aspirated from chest; death.

XI. Man, aged 60; Drs. E. and J. A. Cutter, attendants, latter part of illness; cancer of larynx; tracheotomy had been done; wore tube; suffered much pain; wished to try food treatment; did little good, as he could eat but little, and that finally fed to him through a catheter in fluid form; literally starved to death; a man of great heroism, the late Dr. Wm. S. Hurlocke, of Philadelphia.

XII. Dr. Cutter, attendant; woman, aged 40; 1881; vomitus composed of black grumous fluid; tumors of womb and stomach; relieved and in fair health, April, 1890.

We would like to have presented more of our cases of Bright's disease, tumors and cancer, but space does not permit. A few words must be given as to our ideas in attacking these cases mainly by food.

The word nephritis gives us little light as to the real causes of Bright's disease. We would say, as to our belief, that the disease is commonly an expression of a systemic condition, either a fatty or fibroid degeneration; that the fatty may be acute or chronic; the fibroid most always chronic. Some have thought because they found ganglia

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fattily degenerated that the renal disease was the sequence. But we ask, What was the cause of the ganglionic degeneration?

The answer is: In the food eaten, in the air breathed, in the modes of life, the clothing worn, the amount (too much or too little) taken of exercise; our ways of thought, of carrying on our business; whether we are intemperate, etc. In these long continued and steadily acting causes is to be found the explanation; and until the causes of disease are understood, few men will treat them intelligently and successfully.

The cases that we have treated have been studied, as far as we were able, on all sides; we wished to know all that could be found out about the patient's life. This may seem too simple, but, gentlemen, concrete things, not abstract, cause disease. But to be more particular, let us consider the food part of the question. Starch and sugar contain but three chemical elements; yet they make up a large part of the diet of many.

The old saying is, that "You cannot get blood out of a stone;" certainly phosphorus and nitrogen, to say no more, cannot be made out of carbon; so, on the side of chemistry alone, if a man or woman will persist in feeding on starch and sugar, they must not expect nature to break her laws and change her elements into others.

But, the excessive feeding of starch and sugar will in time produce the carbonic acid, and later on acetic acid fermentations in the alimentary tract. Carbonic acid gas is a poison; it paralyses and kills men and animals when breathed; yet how many live with their stomachs bloated with the gas, wonder why they have heartburn, and their families mourn when they drop suddenly in the street from heart paralysis due to this same gas, or they keep on their way living in spite of their vicious feeding, and the long continual paralysis may result in a fibrous degeneration of the lungs, the stomach, the liver, the kidneys or the spinal cord; or nature, instead of building fibrous tissue under this slow-going paralysis, (for it is well to remember that nature does

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her best always,) will lay in fat in these tissues and keep the bulk of them intact just as long as she can.

A man on treatment for locomotor ataxy was much improved; meeting a friend on Fifth Avenue, he said, "I want to go into Delmonico's and eat a big dinner; will it hurt me?" His friend was a physician, but knew nothing about his treatment; he, however, said, "It will not hurt you." The man followed his advice, filling himself up with fermenting and fermentable food, with the result that the ataxia came back immediately. Why? Because the spinal cord was temporarily paralyzed by the carbonic acid gas. The same thing we have seen within a year in the case of a boy on treatment for the same trouble; his fond mother let him have ice-cream and a big dinner, and his legs were almost immediately paralyzed.

April, 1890, this boy is as bright and lively as most any of his age.

The various fibroid tumors are also instances of degeneration. Nature is doing her best, but she cannot lay down healthy tissues; so she builds with the poorest, to wit: the fibrous tissue. If this is not so, gentlemen, why did our cases recover. Granted we kept them quiet, (when we could) and used every medical means our humble knowledge permitted us to prescribe; yet the main idea, and held to firmly, was that these were diseases of nutrition and must be attacked on that ground.

CANCER.

A woman of fine mind was attacked by two tumors in her 60th year, one just anterior to the right ear, the other below the right breast. By careful attention to diet, so that she lived plainly, by the use of alcohol baths, and by keeping her life in as even a tenor as possible, she lived till she was over 90, and then died of her disease, which was called cancer. The tumor on the head had extended to the external angle of the eye; the tumor on the breast killed her.

A boy, aged 10 years, an orphan, picked up a precarious living setting up ten pins in a billiard alley. He was beaten with one and thrown out, the disease (fungus hæmatoides) commenced; when found, he was on the railroad track; the

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town authorities supported him as a pauper, and the disease, before his death, took in a great part of his body.

A woman carried for thirteen years a large abdominal multilobular, sub-peritoneal and pelvic fibroid. One early spring she was compelled to move into a house (situated in marshy lands) which had not been used during the winter; she took cold, was overworked, and the disease changed into cancer, attacked the bladder and caused death.

A young man of 30, who had lived a riotous life, died in great agony from no known cause. Postmortem showed at least 100 tumors in the peritoneal cavity, on the bowels, liver and other organs; the disease had invaded the vertebræ and the lungs. This man had money enough to buy good food, but used the wrong.

A woman, aged 35, was deserted by her husband; she sued for divorce and finally won her suit. In the meantime cancer appeared in the womb; the disease was arrested and held back for two years, but finally caused death.

In 1887, (*Albany Medical Annals*, July and August,) the senior writer defined cancer to be "Tissue under mob law —tissue rioting—tissue that the body systemic cannot govern, and hence the reversion to embryonic types and the frightful results sometimes seen in this overthrow of the law of the body systemic.

The blood, *i. e.*, in our work, which extends over many years, does not show morphologically any causes; in the end it is impoverished, but we must say with all candor that we do not consider that cancer is a blood disease, but a tissue disease; this is confounding, perhaps, our present ideas, but disease has many phases and we must not look on these matters from one side alone.

You may call, if you please, the cases that recovered not cancer, but the fact remains that they were very sick people before the treatment and are not now. Let this committee take this idea, that *cancer is tissue under mob law*, and then attack it under all of the chances offered to promote the nutrition, and let the members report in another year the results. We could give you more cases, those under treatment at the present time. One case where the right breast had been removed; the disease returned; it was burnt out with

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cautery, and finally came under our care last August, with a sore four inches long, four inches wide and one inch deep, pouring out the most filthy and stinking discharge. April, 1890, this woman is still alive; the sore is smaller; the discharge less. The treatment has been a rigid diet of chopped, broiled beef, the application of tannic acid and quinine ointment to the sore—these applications agreeing better than anything else. Hæmorrhage is now not frequent; still her chances for recovery are very small.

We leave this part of our subject till treatment is considered.

THIRD SECTION.—*Neurasthenia in Males,*

Where often the patients objectively appear like consumptives—occurring amongst business men and students, and is due to improper feeding.

We had intended giving statistics of fifty cases, but our report has grown to too large proportions to present these cases.

A preliminary report on this subject was presented to the Richmond Medical and Surgical Society, January 23, 1890, and published in the *Virginia Medical Monthly* for February, 1890, from which we quote:

"Some thirty years ago, the senior writer was Secretary of the Middlesex (Mass.) East District Medical Society, and, on being requested by me to do so, one of the members, Dr. ——, of ——, kindly stated his case to the Society, and asked for opinions and treatment. It dealt entirely with neurotic symptoms, which varied from time to time, and showed a lack of nerve force, without any organic disease, which could be detected. The case was a poser; no expression of opinion nor of treatment could be drawn from the members. The Doctor himself was a bright, careful, intelligent observer; and his relation showed that he had skilfully treated himself up to the standard of the then present state of knowledge.

"After a series of cases had been worked up for several years, on which this paper is based, Dr. ——'s case occurred to mind, and he gratified me by sending, at my request, seven one-ounce bottles of morning urine voided on seven successive days.

"These specimens, when subjected to physical exploration, *showed the presence of a protoplasmic or colloid discharge,* which,

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in other cases, had been to me a sufficient evidence of one cause of male neurasthenia, and which it is proposed to explain.

"*Morphological Evidence.*—This physical sign is found in the morphology of the urine. (See the Clinical Morphologies, E. Cutter, New York, 1888, p. 45.) It is not that observers have not noticed this discharge; they have, still they have regarded it as of no pathological significance. Where we differ from them is that *we do regard it* as a valuable diagnostic sign of the male neurasthenia.

"The way this difference of view came about was as follows: Since 1880, I have made a practice of studying the morphology of the urine of patients—*sometimes daily for weeks and months.* But coming upon neurotic cases, in which this colloid discharge was the only appreciable lesion, and finding that when such cases were treated and the catarrhal condition removed, they always improved, and so long as the patient would follow out the directions the improvement continued, I was led to take the position here given; and I feel convinced that this complaint is a very common one, occurring often in old and young business men and students who are apparently well, save that their complaints of irritability, pains—sometimes excruciating—making them express themselves in terms which appear, to those most interested about them, whimsical, nonsensical, or, as we used to say in our boyhood, "hypoey." And I might remark here that I now think that if these cases I knew in my boyhood, and were known to the whole community in which they dwelt as "hypoey," could have had the benefit of what is now understood, they would have passed from the opprobria which rested upon them by proving that there was a physical foundation for their condition, just as the women who had the same term applied to them in those days would have been relieved by finding some gynecological disease.

"*What to Look For.*—In a case of male neurasthenia, which comes to you with a long story of aches, pains, weakness, and sufferings, which appear so momentous that you wonder how the sufferer could be alive, and of having want of confidence in the medical profession to discover the seat of his complaint or to relieve him. Usually there is a degree of self-confidence and positiveness of statement in his own conviction, which reminds us of the same qualities which we find in our better-halves. You look the case all over carefully; no lesion is found to explain such a great departure from normal innervation. You examine the urine; it appears clear, amber-colored, of good specific gravity, normal in odor, and all that is seen, if you allow it to stand over-night, is a light, protoplasmic cloud, occupying, sometimes, the whole of the lower half of the vial. Or, if in graduate glass measure, the cloud will

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swing half way between top and bottom of urine. You cannot tell by the naked eye the character of this discharge. It is put under the microscope, and the deposit is not made up of triple phosphates or urates; but if you use (as you had better use) a one-inch objective—which is a good one, and the best are none too good—you will find, if the case is a typical one, collections of gluey (colloid) viscid matter, with no extra amount of mucous corpuscles or mucous epithelial cells, moulded in shape like Indian clubs, varying in color from white to a brown; then, if you look further, skeins of colloid matter, curled up in fanciful shapes, sometimes separated into single filaments, and sometimes filling the field so full of the Hogarth lines of beauty that you cannot help expressing your surprise, perhaps to the discomfort of your anxious patient. Besides this, the discharge is sometimes diffused through the urine in a light, fleecy, unorganized cloud, which it is sometimes difficult to recognize *unless one is familiar with protoplasmic studies.*

"Although these three forms are sometimes found together, still they are often found separate, so that, in enumerating them, we speak, *first*, of the protoplasmic; *second*, of skeins; *third*, of Indian clubs. *Next*, you must examine *seven successive specimens of seven days—i. e.*, one of each day, the first urine voided on rising. It has not seemed justifiable, in a chronic case, to base the diagnosis on one examination. For example, spermatozoa may be normally discharged once or twice a month; and if you happen to get a specimen on the day of that normal discharge, it will be unwise to jump into the conclusion that the case is one of spermatorrhœa.

"Spermatorrhœa, according to my experience of thirty-six years, is a rare disease, and the diagnosis of it not complete unless the forms are found very much oftener than the normal discharge.

"I may be wrong, but I do not consider the finding of the colloid secretion in one specimen evidence enough; it must be found in a majority of the discharges for the days of the week. When you study urine daily, you will find that it varies very much. For example, in the cases in question I have been very much surprised to find them alternating on some days with albumen, casts of the kidney tubes, and fatty epithelia, which I regard as diagnostic of Bright's disease."

In both neurasthenia and Bright's disease of the kidneys, there is more or less paralysis of the parts involved. Some regard the fatty degeneration as a means of staying the effects of the paralysis. In other words, that the destruction of tissue would proceed more rapidly were it not for the fatty degeneration. Still the neurotic symptoms differ. In

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simple Bright's disease of the kidneys, there is but little pain; and when it occurs, it comes from rheumatism; and even the neurasthenia, which is found sometimes along with Bright's disease. The subject is not fully worked up in this aspect, and hence I cannot speak so confidently; but it is a very interesting matter for consideration why the loss of albumen should not cause pain when the colloid and perhaps albuminoid discharges, which are found in the complaint under discussion, assuredly do. One thing is certain, the neurasthenics thrive in the open air, and are worse in indoor air. A clergyman with this trouble said he would be all right if he worked on a farm out doors, but he wanted to use his brain in his work. A diet substantially what is lined out below cured him, so that he now works in-doors, and has recovered from impotency. But air is food. There is as much difference between fresh and foul air as between fresh meat and old.

"*As to the Importance of this Form of Neurasthenia.**—When first acquainted with this disease, I knew it was hard to bear but did not think it was dangerous; but I have had patients die with it, and the autopsies showed no sufficient cause of death. The manner of going out was with a sudden failure of the heart, as if there was not enough force to run it; so I am led to take a more serious prognosis. The patients may live, like Dr. ———, for thirty years, and though he considers that his life has been prolonged by the disease—because it has made him careful, where he would have been careless—I believe there is danger, especially as the urine will alternate with albuminuria, fatty epithelia, and renal casts as before noted. The complaint is not due to sexual abuse, *i. e.*, as a sole cause; it is a food disease. The catarrh is mainly from the ducts of the prostate and spermatic glands."

General Rules of Treatment for the Three Sections.

Never prescribe raw beef.

Preparation of Boiled, Chopped Beef.—Take beef from middle of the top of round of well-fed cattle, who were not overdriven just before death. In the handling of these chronic

* Quoted from *Virginia Medical Monthly*, February, 1890, page 890.

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cases too much care may not be observed in the selection of beef; life often hangs on the smallest detail.

Cut beef into tubes one inch by one inch by two or three inches. Free from fat and connective tissue by running it through the Enterprise chopper three times, each time cleaning the fibrous tissue from the plate at distal end of machine; or use American chopper, which is noisy, but is the best. Touch with the hands the muscle pulp as little as possible, as the human animal heat changes the character of the meat. Mould into cakes one inch thick, and as many inches wide as needed. Broil over bed of live coals, charcoal the best; oil or gas can be used. The beef when done should be of very dark color outside, and when opened present a reddish but not raw appearance. If the beef is rightly prepared, it will be pleasant to the taste. The preparation must be done by a conscientious, intelligent and humble individual: humble, because most cooks think they know everything about cooking, when commonly they know nothing; and the one who has the work of getting ready this beef and cooking it, has a position whose influence for good or bad cannot be overestimated.

Serve on hot-water plate, and season with pepper, salt, lemon juice, Worcestershire sauce, and in some cases, butter.

Drinks.—Drink one pint of spring or distilled water that has been raised to the boiling point, one hour before each meal and on retiring. Cool the water to a comfortable temperature and drink slowly. Rest till meal-time; also after meals. The amount of water may be increased or diminished as the urinometer indicates. The urine must be at 1015 to 1020 specific gravity, free from odor, phosphates, bile or deposit. Drink clear tea or coffee at meals.

Baths.—Take ammonia sponge bath, one drachm to a pint of water, night or morning; or nitric acid baths, same proportion. Quinine and salicin may be given in bath per skin. The acid baths, and especially with alkaloids, are indicated in sweats.

Exercise.—Passive, by massage, so as to confer force. Also passive by riding in carriage. Also by riding on a walk-

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ing horse. Do not wear people out with too much walking. Sick ones need their nerve forces for something else.

Drugs.—The rule may be laid down, *that the fewer drugs given by the stomach the better.* Yet cases come where there has to be the most careful exhibition of medicines; and at times, these same cases, will, after taking a great deal of medicine, improve almost immediately on stopping all drugs per stomach. The integrity of the stomach must be kept at all hazards. Treating these cases, one learns how to wait.

Tonics.—Salicin, strychnia, pyrophosphate of iron, cinchona, mixtures of the mild vegetable fluid extracts. English iodide of potash in small doses, in asthmatic and rheumatic complication and in syphilis. Biniodide of mercury, 1-16 grain, an admirable chologogue. Exsiccated sulphate of soda for constipation. Boneset, etc., etc., etc. *Each case is a law unto itself.*

In *consumption, tumors and cancer*, the closer patients adhere to a rigid diet of the chopped broiled beef, the better they will do. Sometimes the stomach rebels; this it does when the beef is not right, despite the protestations of the butcher to the contrary; on finally pressing the point, you will disclose that the beef has been kept too long.

Again, the stomach needs firm discipline; there is a hysterical element in some cases, (the word hysteria has been poorly used), which must not be catered to, and at times, roughly handled. Prof. Wm. Goodell tells of how he stopped a patient from vomiting by giving her a most cruel scolding. The rule is this, that the closer the lines are drawn, the better will the patient do; no man need expect to succeed treating chronic disease, if he has to argue with his patients on the right or wrong of this procedure.

When the urine becomes normal, the blood in good order, the physician may bring in gradually some vegetable food, as toasted bread, boiled rice. It has been said we were too rigid, but, gentlemen, each case is a law unto itself, and you must feed accordingly.

Bright's disease will respond better when patients are on

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rigid diet. Yet we have cases of business men who live on steaks and eat some vegetable food.

The same rule applies to neurasthenia. The cases usually occur in those that cannot leave their business. It must be remembered that when the supply of fermenting food is cut off, the patient, previously half drunk, and paralyzed by carbonic acid gas and alcohol, slumps, so to speak, and lays all his trouble to his diet. At these times, it is well to give first-class whiskey or brandy to some cases. No wines, porter, ale or beer. Use the whites of eggs slightly poached.

At times patients have to eat entirely against their appetite. Usually it is not well to eat beyond the appetite. In cases where stomachic feeding must be stopped for a while, alimentation has to be done per rectum and skin. It is well for all to remember, that even the most depressing of cases where the prognosis appeared fatal have recovered. Have all chronic cases go on treatment for a year at least, and pay fee in advance each month.

We hope to present within a year to the profession a work entitled, "Food and Disease for the Student and Practitioner of Medicine upon Tuberculosis, Bright's disease, Tumor, Cancer, Rheumatism, Diabetes, Obesity, Uterine disease, Laryngeal disease, Neurasthenia, etc., etc., exemplifying the Need of the Use of the Microscope by all Practitioners of Medicine; and illustrated by over one hundred micro-photographs of objects within and without the body." The work is to be sold by subscription only.

The Ariston, Broadway and Fifty-fifth Street.

Chemical Food is a mixture of Phosphoric Acid and Phosphates, the value of which physicians seem to have lost sight of to some extent, in the past few years. Messrs. R. A. Robinson & Co., to whose advertisement (on page 28) we refer our readers, have placed upon the market a much improved form of this compound—"Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

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Clinical Reports.

A Flake of Steel Lodged in the Ciliary Region of an Eye—Severe Pain and Sympathetic Irritation a Year Later—Enucleation Gives Immediate Relief.

By DAVID WEBSTER, M. D., of New York, N. Y.

PROFESSOR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC AND IN DARTMOUTH MEDICAL COLLEGE; SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL, NEW YORK, ETC.

Mr. Frank H., aged 26, came to my Clinic, at the Manhattan Eye and Ear Hospital, on April 9, 1890. He stated that on the morning of May 12, 1889, while riveting a spring on a throttle-handle, striking the rivet with a hammer, a piece of steel flew into his right eye. He felt the blow, and put his hand up to the eye. Immediately afterward, he opened the injured eye, and covered the other to see if the sight was affected. It then seemed to him as if there was a veil in front of the eye. He kept on with his work until the day's work was finished, and then went home and put on a bread and milk poultice. There was not much pain. A few days later, he went to see Dr. Deady, who told him he thought he could see a piece of steel in the crystalline lens, and advised letting it alone, unless there should be symptoms of sympathetic trouble.

When tested at the hospital his vision and refraction were as follows:

R. V.=$\frac{20}{70}$; no improvement with glasses.

L. V.=$\frac{20}{20}$; hm. $\frac{1}{72}$.

The injured eye gave him no trouble for some time after the accident. Then it began to have periods of redness with pain. The attack which brought him to the hospital was the third one, and that got better after a few days.

On *April 30th*, he came to see me at my office. He said that, for the last eight or nine days, the injured eye had pained him very much, so much that it had interfered with his sleeping at night. For the last *six days* the fellow eye has been *feeling weak*, though not painful. The right eye is very red, full of tears, and so sensitive to light that he goes about with his handkerchief held up to it. It is difficult to get it open sufficiently wide to examine it. It is so sensitive to the touch that testing the tension causes him to shrink away. The tension is increased, the cornea is hazy, the anterior chamber is deep and muddy, the pupil is somewhat

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irregularly dilated, the iris and lens are dull and muddy-looking, there are pigment spots on the lens capsule, and the vision is down to $\frac{18}{200}$. The left eye still has vision $\frac{20}{20}$, but is sensitive to light, and is evidently beginning to sympathize with the right.

As there was still useful vision in the injured eye, and as the foreign body was said to have been seen in the lens by a reputable ophthalmologist, I decided to try to save the eye by attempting to extract the lens with the steel in it through a broad iridectomy, thus, at the same time, relieving the glaucomatous symptoms and getting rid of the foreign body.

Accordingly, he was received into the Manhattan Eye and Ear Hospital, ether was given, and an iridectomy upward was performed. But the anterior chamber immediately became filled with blood, and we thought it wiser to defer extraction of the lens until the blood should be absorbed so that the operator could see what he was doing. Meanwhile, I hoped that the iridectomy, by diminishing the tension, would relieve the pain and quiet the eye.

The next day (*May* 1), the eye showed a good deal of reaction. There was chemosis, redness, and photophobia. Iced cloths were ordered to be applied continuously, and a solution of sulphate of atropia to be dropped into the eye three times a day.

May 4.—The chemosis is mostly gone; but the redness and photophobia remain, and the wound is rough. The eye continues to be as painful as before the operation.

May 7.—There was constant pain in the eye, only partially relieved by anodynes taken daily, and by local applications. The fellow-eye seemed to be becoming more and more sensitive to light.

After consultation with Drs. Roosa, Pomeroy, and Emerson, I concluded to remove the crystalline lens; and if the piece of steel should not be found in it, to proceed to enucleate the eyeball immediately.

Mr. H. was now placed under ether again, and the lens extracted, piecemeal, through an upward section, at the sclero-corneal margin, by means of pressure and counter-pressure with spoons. No foreign body came out with it. A Gruening's magnet was then introduced through the wound, and carried about in various directions in the eye. But it failed to extract the steel. I therefore proceeded to

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enucleate the eye, and, with care and delicacy of manipulation, succeeded in getting the eye out without causing the escape of its vitreous contents.

We cut open the enucleated globe on the spot through its equatorial meridian. The posterior half seemed to be perfectly healthy.

Attached to the ciliary body, encapsuled and surrounded by an area of organized lymph, about a quarter of an inch in diameter, was a small flake of steel, flat, irregularly-shaped, and about two millimetres in diameter. The piece of steel may have originally lodged in the lens, and in process of time, and aided by the constant changes in the shape of the lens in the act of accommodation, may have gradually worked its way out of the lens and into contact with the ciliary body, where it produced a localized cyclitis, and thus encapsuled itself and fastened itself down to the ciliary body with lymph exudation. On the other hand, the foreign body may have been lodged, originally, in the place where it was found, and a piece of iris-pigment carried along with it, and left in its track through the lens, may easily have been mistaken for the steel itself. I incline to the latter view. At all events, it is very evident that the eye was not taken out any too soon.

May 14.—There has been no pain or photophobia since the enucleation. An artificial eye was put in on the fifth day, and he was discharged from the hospital to-day with V.=$\frac{20}{15}$, with all his symptoms relieved except those inseparably connected with the first few months of monocular vision, and wearing a satisfactory artificial eye.

I desire to acknowledge the services of my assistant, Dr. Sanders McAllister Payne, and of Dr. W. J. Killen, House Surgeon of the Manhattan Eye and Ear Hospital, in getting together the notes of this case.

266 *Madison Avenue.*

McArthur's Hypophosphite Advertisement.

You will find genuine scientific and interesting instruction on white card-board between pages 52 and 53 after reading matter, occupied by the McArthur Hypophosphite Co., of Boston.

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A Case of Removal of the Ovaries and Tubes—Death from Exhaustion on the Fourth Day.*

By JOHN N. UPSHUR, M. D., of Richmond, Va.

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, MEDICAL COLLEGE OF VIRGINIA. HONORARY FELLOW OF THE MEDICAL SOCIETY OF WEST VIRGINIA.

Miss ——, blonde, aged 25, first came under my care in March, 1886. My note-book at that time gives the history of obstructive dysmenorrhœa, from anteflexion of the uterus. She was treated by forcible dilatation. and the application of Battey's Solution No. 2 (carbolic acid, 4 parts; iodine, 1 part) to the cavity, with complete relief.

During the succeeding four years, she constantly consulted me for various minor troubles.

About two years ago, she began to be troubled with irregularity in her menses—the flow being usually delayed, and excessive and exhausting when it came on, and only temporarily controlled by appropriate remedies.

On February 5th, 1890, she entered the Retreat for the Sick. The irregularity and exhausting flow at her periods had increased. She suffered much from nausea and occipital headache, which was much increased at the time of the period. I found that she frequently had fainting spells, or rather periods of unconsciousness, and after close observation I was convinced that she was addicted to the habit of self-abuse. I charged her with it, and after explaining what I meant, for she did not understand, she admitted it, and promised that it should not occur again. From this time on she had no more attacks of unconsciousness. But the nausea was persistent and distressing, so that she could take only liquid food, and the occipital headache was at times excruciating. Careful examination revealed great tenderness over each ovary, especially the left, with increase of nausea and headache. She also described a pulsating sensation in the left ovarian region. Digital examination, *per vaginam*, showed thickening on the left side, and I discovered a little tumor in Douglass' pouch, which I thought a prolapsed ovary, which was pressed on by the uterus—the patient complaining of increased nausea and headache from handling. There was a condition of most intense hyperæsthesia of the whole vaginal canal, and about all of the generative organs and region.

*Read before the Richmond Academy of Medicine and Surgery, May 13th, 1890.

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She was seen in consultation by Dr. Herbert M. Nash, of Norfolk, Va. He was not satisfied that he discovered the prolapsed ovary, but made out the thickening on the left. He advised the use of cotton-wool tampons to "relieve the hyperæmia;" and if unsuccessful, agreed with me, that the only hope of relief lay in the removal of the ovaries. She was unable to have this treatment, because of the intense hyperæsthetic condition of the vaginal canal, even a simple douche of hot water causing such erotic feeling as to be the source of agonizing suffering, and the poor girl begged that I would not order it again.

The difficulty and dangers of removal of the ovaries was fully explained to her, and she calmly and heroically elected to have the laparotomy performed, preferring death to a continuance of her present suffering. At times her mind had been unbalanced slightly, and she had once attempted suicide.

April 22*d*. Bowels freely moved by enema. She then took opium, gr. j; muriate quinine, grs. iij, in the morning. She was anæsthetized with a mixture of chloroform one part, and sulphuric ether two parts.

Assisted by Drs. George Ross, Lewis C. Bosher, and Ellis, and in the presence of Drs J. S. Wellford, Blanton, Chalkley, and Baird, under strict antiseptic precautions, I proceeded to remove the ovaries. An incision of three inches was made; and after all hæmorrhage was stopped, the abdominal cavity was opened, and with some difficulty the left ovary and tube were ligated and removed. *There was positive and unmistakable resistance to the drawing up of the ovary from erection of the Fallopian tube, due to a condition of hyperæsthesia*—this contraction yielding after a few minutes. This ovary was flattened, thinned, fibrous, and on one extreme edge was a very small Graafian vesicle. So sensitive was it, that the patient groaned, and was almost aroused from profound anæsthesia, when the clamp-forceps (Keith's) was applied to draw it out for ligation of the pedicle. The tube was in a condition of chronic inflammation, but contained no pus. The right ovary was found posterior to the uterus, where it was diagnosed prior to the operation, and the same condition of erection was noted in the right tube. This ovary was cystic, and the tube inflamed, and broad ligament contained several cysts. The ovary was so soft that it broke away under pressure of the clamp-forceps before the ligature could be applied to the pedicle. Here occurred the only complication of the operation; the ligature

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slipped, from the pedicle being accidentally cut too close, and there was free hæmorrhage from the ovarian artery, which, with some little difficulty, after enlarging the abdominal incision an inch and a half, was most dextrously caught by Dr. Bosher, and a ligature applied. The abdomen was thoroughly cleansed, a drainage tube introduced, and the abdominal wound closed by eight deep and two superficial carbolized silk sutures; dressed antiseptically, and the patient placed comfortably in bed.

There was little or no shock, and the color had returned to her lips and face before the abdominal wound was closed. After being placed in bed, the nurse attempted to roll the bedstead near the electric bell (it had been moved to make room for the operating-table), when the side of the bedstead suddenly came off, and the patient had a fall of about a foot, broken, however, by the spring under the mattress. This jar was the first thing which she recognized on coming from under the anæsthetic. She was promptly and gently lifted on the mattress to another bedstead, and her subsequent condition showed no ill effects, unless it had something to do with the nausea, of which she soon complained. She also complained of pain all over. A hypodermic of sulph. morphia and atropia ($\frac{1}{4}$ gr. and $\frac{1}{150}$ gr.) was given, but did not control the nausea. Teaspoonful doses of hot water were tried but failed; also bismuth and cocaine, brandy and ice, drop doses of Fowler's solution, milk and lime water, but all to no avail, and the nausea kept up to the end. The urine was twice drawn by catheter, and then she lost control of the bladder, and voided her urine involuntarily, wetting the bed in spite of the utmost precaution. Ten hours after the operation, pulse 116, temperature $99\frac{2}{5}$.

April 23*d*. Did not sleep at all last night; pulse 112, temperature $99\frac{3}{5}$. Says pain in stomach resembles griping from green apples. P. M.—Pulse 120, temperature 100° F. Ordered 50 gtts. McMunn's elixir of opium by rectum.

24th A. M. Slept four hours last night; pulse 125, temperature 99° F.; not so well. P. M.—Pulse 120, temperature $101\frac{4}{5}$° F.; mind disposed to wander.

25th A. M. Had a bad night; pulse 140, temperature 102° F.; passed some flatus; no distension of abdomen, nor has there been any since the operation. Says she is going to die. From this time on, symptoms increased in gravity, and the patient died on 26th, 5:30 A. M., the fourth day after the operation. Cause of death, exhaustion. Every effort was made to nourish her by nutrient and stimulant enemata.

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Autopsy, seven hours after death. Abdominal wound well agglutinated; cavity of abdomen entirely free from blood clots, serum, etc.; very slight peritonitis.

Remarks.—When a case of this kind terminates unfavorably, the first question which arises in the mind of the operator is, Was the operation imperatively demanded, and therefore justifiable? In this instance, fortunately, there is no doubt as to the answer, *It was.* The intractable nausea, occipital headache, irregular menstruation, menorrhagia (excessively so), the absolute certainly that she would never have been any better, all these facts pointing to the diseased condition of the ovaries and tubes, confirmed a removal, and coincidently the evil habit acquired, and the danger to her mental condition. The *hyperæsthetic* condition of the tubes, resulting in their erection and resistant action for a time to a withdrawal of the ovaries from the cavity, is a complication I have not seen noted in any accounts of the operation. Another interesting feature is the reflex paralysis of the bladder, and it becomes an interesting question, had she recovered, how long would this impairment of function have continued, or might it have been permanent?

Finally, the universal impression is that the habit of self-abuse is chiefly a moral delinquency; but I would call especial attention to a statement of Mr. Tait, especially in the face of the diseased condition of the ovaries found in this case. He says, "When discovered * * * * * it strikes everybody with such horror that it is at once concealed and hushed up, instead of *being treated, as it ought to be, as a disease.*"—(*Diseases of Women and Abdominal Surgery,* Vol. 1, p. 59.) To view it from this standpoint is, to say the least, charitable, and enables us the better to treat these melancholy cases.

Have derived particularly gratifying results from the use of Tongaline in Dysmenorrhœa when not dependent on obstruction or serious organic disease.—T. F. Frazer, M. D., Commerce, Mo.

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A Successful Case of Nephrectomy, with Remarks.

By GEORGE BEN JOHNSTON, M. D., of Richmond, Va.

Late Professor of Anatomy in the Medical College of Virginia, Etc.

Adams' Case.—Early in the summer of 1889, I was requested to see Willie Adams for a urinary trouble. I found him a frail, delicate youth of twenty, following the avocation of a city lamp-lighter. He had already been under the care of another medical man. I was told that this gentleman suspected stone in the bladder. There were present many of the symptoms of stone. A search failed to verify the suspicion. An intense cystitis existed. The urine was voided innumerable times during the day, and always with great pain and tenesmus. His nights were rendered sleepless by this uncontrollable disposition to urinate. Only a few drops were voided at a time—never so much as two drachms. So constant was the desire to urinate and so irresistible, that he assumed the knee-elbow position, with a cup under the penis, and maintained it even while sleeping. In consequence of this attitude, there followed a distressing contraction of the hamstring muscles, which has continued until now. The urine was characteristic of chronic cystitis. The bladder had become greatly contracted, so much so that its capacity was less than a half ounce. Opiates afforded but little relief. The appetite was gone, and great wasting had taken place. In spite of most energetic treatment the cystitis persisted. It presently became apparent that the right kidney was involved by extension of inflammation. Rigors, sweats, and rises of temperature, betokened grave encroachment upon this organ. Finally, in October, a swelling appeared in the loin, which was opened, and a large flow of pus took place. The pyo-nephrosis had become complicated by peri-renal abscess following a perforation of the capsule, and escape of matter into the kidney space.

No surgical interference, beyond the opening of the abscess, would be permitted at this time. Large quantities of pus, yielding urea, escaped from this fistulous opening in the loin. The symptoms grew more grave, and when it became evident that the result must be soon fatal, consent was given to resort to appropriate surgical treatment.

Accordingly, on *December* 12, 1889, assisted by Doctors Coleman, Bosher, Lee, Blanton, Oppenheimer and Preston, I performed in the usual way lumbar nephrectomy. No

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difficulty was experienced in separating the kidney from its attachments. It was not easy, however, to ligate the pedicle, which, when accomplished, allowed the organ to be cut away by scissors. The stump was disinfected and dropped back into the wound, and the walls of the large cavity occasioned by the perinephral suppuration, were scraped and disinfected also. A large perforated drainage tube was inserted, and the wound closed with silver sutures and dressed antiseptically. Reaction was prompt. Hypodermic morphia was given. A few hours later, Dr. Coleman visited him and found the dressing stained with blood. It was not removed, however. Hypodermic morphia was again given to induce sleep and relieve vesical tenesmus. He spent a better night than was common for him, and expressed himself on the morning of the 13th as feeling very comfortable. His temperature, which on the day of operation had been up to 101.5°, was now normal. His pulse was also reduced in frequency, and of a better character. He had not urinated so frequently, and the bladder was emptied with less pain.

On this day some trifling clots of blood appeared in the urine. The quantity of pus it contained was wonderfully diminished. During the evening he complained of some distress from the tightness of the dressing, which was relieved, when a new and looser dressing was applied.

December 14th. He passed a very good night, the frequency of urination diminishing and pain lessening. The quantity of urine passed during the previous twenty-four hours was one quart, which was much improved in character, being free from pus. He was quite cheerful, and expressed himself as feeling hungry. His pulse was good, and his temperature continued normal. The amelioration of painful symptoms was more marked in this case than in almost any I have ever seen. Improvement continued; morphia was withdrawn in a few days

On the 25th of December, he was able to leave his bed. Steadily the urine improved, and with this improvement came a cessation of the severer bladder symptoms, until he only passed water four times during the night, and perhaps six times during the day, showing an increase in the capacity of this viscus, and a diminution of the inflammation. His appetite was now excellent, and upon generous diet his flesh increased. As the wound continued to discharge from the large cavity formed by the removal of the kidney and a perirenal abscess, the drainage tube was not removed early,

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but shortened from time to time until the twenty-seventh day after the operation, when it was withdrawn.

The kidney was submitted for inspection to Mr. Hugh Blair, who had assisted me greatly in this case by frequent and skillful examinations of the urine. This is his description of it:

"The kidney is 5 inches long, 3 inches wide, and weighs 6½ ounces. The capsule is closely adherent. The position usually occupied by the calyces is now represented by sacs that would hold, probably, 2 or 3 drachms of fluid. The upper portion of the kidney is occupied by a pus cavity that would contain one fluid ounce or more. It had very much the appearance of the cheesy-looking pus cavities found in the lungs of tuberculous subjects. The parenchyma of the kidney was much toughened. There was no cartilaginous appearance, such as is found in scirrhus. No doubt the kidney had been much larger, but after suppuration, and the pus had found its way out externally, there was contraction and consequent hardening. The microscope revealed no cancer cells."

Since preparing this report Adams has died. His death occurred on the hundredth day after the operation. Thirty days previous to his death he began to decline. In the beginning, there were no marked symptoms beyond the loss of what strength and flesh he had accumulated. Exhaustion by and by became very noticeable. Later rigors and sweats came on, accompanied by pain over the two last dorsal vertebræ. The wound re-opened and discharged healthy pus freely. Ten days before his death, he had a violent convulsion, followed by no coma. I was at a loss to account for this. The urine was normal, except that it contained mucus and small quantities of pus coming from the inflamed badder. Exhaustion progressed, with now and then a convulsion, until his death.

Twenty-four hours after his death, Dr. Coleman and I made an autopsy. The body was fearfully emaciated. The margin of the new opening had sloughed by reason of debility, and pus had escaped from it. The abdomen was opened. There was evidence of a previous severe peritonitis, of which no history was given. Otherwise the intraperitoneal organs were healthy. The walls of the bladder were greatly thickened, and chronic cystitis, without deep ulceration, was present. The remaining kidney (left) was found to be perfectly normal. The kidney space, from which the right kidney had been extracted, had filled up

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and was thoroughly healed. The fistulous opening in the loin led up to an abscess in the side of the body of the eleventh dorsal vertebra, which it had perforated by an opening, perfectly circular in form, and of about the calibre of an ordinary lead pencil. This opening allowed the entrance of pus into the spinal canal, and thus the membranes became inflamed, which occasioned the convulsions and death.

Remarks.—Simon added a triumph to modern surgery in planning and executing nephrectomy.

The indications for its performance are briefly—

1. Injury to one kidney which, from hæmorrhage or suppuration, threatens life.
2. Urinary fistula following rupture of the ureter.
3. Unilateral tuberculosis in its early stage.
4. Tumors which are benign and the sarcomata of adults.
5. When palliative measures have failed to relieve floating kidney, which affords great distress.
6. As a secondary operation in hydro- and pyo-nephrosis.

It may be performed by one of three methods—

1. In the loin, following the outer border of the erector spinæ muscle.
2. At the outer border of the restus abdomins muscle.
3. In the linea alba.

For obvious reasons, the first of these routes is to be chosen when the nature of the case allows a choice. In the first place, the kidney is reached without trespassing upon any important structure. The peritoneum is not wounded, and thus escapes contamination. By reason of its dependent position, the wound is easily drained. By either of the abdominal incisions the peritoneal cavity is entered, and thus the gravity of the situation is added to. The abdominal sections, however, have the advantage of permitting an inspection of the supposed healthy kidney, which, on occasions, might prevent an egregious blunder.

It may be said, in a general way, that the lumbar incision is to be selected for the removal of the fluid tumors of the kidney and inflammatory conditions, while for the

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larger solid and non-inflammatory tumors the abdominal section is to be preferred.

In either case, the most careful antiseptic precautions are to be observed.

The operation has been performed, as shown by statistics detailed by Ashurst, four hundred and five times.

These cases terminated thus:

In recovery, - - - - - -	257
In death, - - - - - -	148

Giving a mortality of 36.5 per cent.

Correspondence.

Official Report of Joseph Jones, M. D., of New Orleans, Louisiana, Surgeon-General United Confederate Veterans, Concerning Medical Department of the Confederate Army and Navy.

156 WASHINGTON AVENUE,
NEW ORLEANS, LOUISIANA, June 30th, 1890.

To his Excellency John B. Gordon, General Commanding United Confederate Veterans, Atlanta, Ga.:

GENERAL:—I have the honor to submit the following:

The Medical Department of the Confederate States was a branch of the War Department, and was under the immediate supervision of the Secretary of War.

The Surgeon-General of the Confederate States was charged with the administrative details of the Medical Department—the government of hospitals, the regulation of the duties of Surgeons and Assistant Surgeons, and the appointment of acting medical officers when needed for local or detached service. He issued orders and instructions relating to the professional duties of medical officers, and all communications from them which required his action were made directly to him.

The great struggle for the independence of the Southern States ended twenty-five years ago, and all soldiers in the Confederate Army, from the Commanding General to the pri-

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vate in the lower ranks, were, by the power of the conquering sword, reduced to one common level, that of *paroled prisoners of war.*

The objects of the Association of Confederate Veterans of 1890, are chiefly *historical and benevolent.* We conceive, therefore, that the labors of the Surgeon-General relate to two important objects.

First. The collection and preservation of the records of the Medical Corps of the Confederate Army and Navy.

Second. The determination by actual investigation and inquiry, the numbers and condition of the surviving Confederate soldiers who have been disabled by wounds and diseases, received in their heroic defense of the rights and liberties of the Southern States.

To accomplish the first object, the following Circular No. 1, has been issued:

1. *The Collection and Preservation of the Records of Medical Officers of the Confederate Army and Navy.*

Circular No. 1.

OFFICE OF SURGEON-GENERAL
UNITED CONFEDERATE VETERANS.
NEW ORLEANS, LA., April 9th, 1890.

To the Survivors of the Medical Corps of the Confederate States Army and Navy:

COMRADES:—The surrender of the Army of Northern Virginia on this day, twenty-five years ago, practically ended the struggle for independence of the Southern States, and during this quarter of a century, death has thinned our ranks, and our corps can now oppose but a broken line in the great struggle against human suffering, disease and death.

S. P. Moore, Surgeon-General of the Confederate Army is dead; Chas. Bell Gibson, Surgeon-General of Virginia; Surgeons L. Guild, A. J. Ford, J. A. A. Berrian; J. T. Darby, W. A. Carrington, S. A. Ramsey, Samuel Choppin, Robert J. Breckenridge, E. N. Covey, E. S. Gaillard, E. A. Flewellen, Paul F. Eve, O. F. Manson, Louis O. Foard, S. E. Habersham, James Bolton, Robert Gibbes, and a host of medical officers of the Confederate States Army are dead.

The Association of the United Confederate Veterans was

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formed in New Orleans in 1889, the objects of which are historical, sociable and benevolent. Our illustrious commander, General John B. Gordon, of Georgia, has ordered the United Confederate Veterans to assemble in Chattanooga, Tennessee, on July 3rd, 1890. It is earnestly hoped that every surviving member of the Medical Corps of the Confederate Army will meet upon this important occasion, and promote by his presence and his counsels the sound interests of the United Confederate Veterans.

It is of the greatest importance to the future historian, and also to the honor and welfare of the medical profession of the South, that careful records should be furnished to the Surgeon-General of the United Confederate Veterans, embracing the following data:

1st. Your name, nativity, date of commission in the Confederate States Army, nature and length of service of every member of the Medical Corps of the Confederate States Army.

2nd. Obituary notices and records of all deceased members of the Medical Corps of the Confederate Army.

3rd. The titles and copies of all field and hospital reports of the Medical Corps of the Confederate Army.

4th. Titles and copies of all published and unpublished reports relating to military surgery, and to diseases of armies, camps, hospitals, and prisons.

The object proposed to be accomplished by the Surgeon-General of the United Confederate Veterans, is the collection, classification, preservation, and final publication of all the documents and facts bearing upon the history and labors of the Medical Corps of the Confederate States Army during the civil war, 1861–1865.

Everything which relates to the critical period of our national history, which shall illustrate the patriotic self-sacrificing, and scientific labors of the Medical Corps of the Confederate States Army, and which shall vindicate the truth of history, shall be industriously collected, filed and finally published. It is believed that invaluable documents are scattered over the whole land, in the hands of survivors of the civil war of 1851–1865, which will form material for the correct delineation of the medical history of the corps which played so important a part in the great historic drama.

Death is daily thinning our ranks, while time is laying its heavy hands upon the heads of those whose hair is already whitening with the advance of years, and the burden

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of cares. No delay, fellow comrades, should be suffered in the collection and preservation of these precious documents.

To this task of collecting all documents, cases, statistics and facts relating to the medical history of the Confederate Army, the Surgeon-General of the United Confederate Veterans invites the immediate attention and co-operation of his honored comrades and compatriots throughout the South.

Respectfully, your obedient servant,

[Signed,] JOSEPH JONES, M. D.

Formation of the Medical Corps of the Confederate Army and Navy

The entire army of the Confederate States was made up of volunteers from every walk of life, and the Surgical Staff of the army was composed of general practitioners from all parts of the Southern country whose previous professional life, during the period of unbroken peace which preceded the civil war, 1861–65, gave them but little surgery, and very seldom presented a gunshot wound. The study of the hygiene of vast armies hastily collected to repel invasion, poorly equipped and scantily fed, as well as the frightful experience of the wounded upon the battle field, and the honorable sufferings of the sick and wounded in the hospital, unfolded a vast field for the exercise of the highest skill and the loftiest patriotism of the medical men of the South. This body of men devoted solely to the preservation of the health of the troops in the field, to the succor of the wounded on the battle field, and the preservation of their precious lives, and the surgical care of their mangled bodies and limbs, and the treatment of their diseases in field and general hospital, responded to every call of their bleeding country, and formed upon land and upon sea one indivisable corps, which penetrated all arms of the service, and labored for every soldier, however exalted or however low his rank. When the storm of war suddenly broke upon the Confederacy, and the thunders of cannon were heard around her borders, and her soil trembled with the march of armed battalions; when her ports were blockaded, and medicines and surgical instruments and works were ex-

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cluded as contraband of war, the medical practitioners of the South gave their lives and fortunes to their country, without any prospect of military or political fame or preferment. They searched the fields and forests for remedies; they improvised their surgical implements from the common instruments of every day life; they marched with the armies, and watched by day and by night in the trenches. The Southern surgeons rescued the wounded on the battle field, binding up the wounds, and preserving the shattered limbs of their countrymen; the Southern surgeons through four long years opposed their skill and untiring energies to the ravages of war and pestilence. At all times, and under all circumstances, in rain and sunshine, in the cold of winter and the burning heat of summer, and the roar of battle, the hissing of bullets and the shriek and crash of shells, the brave hearts, cool heads, and strong arms of Southern surgeons, were employed but for one purpose—the preservation of the health and lives and the limbs of their countrymen. The Southern surgeons were the first to succor the wounded and the sick, and their ears record the last words of love and affection for country and kindred, and their hands closed the eyes of the dying Confederate soldiers. When the sword decided the cause against the South, and the men who had for four years borne the Confederacy upon their bayonets surrendered *prisoners of war*, the members of the Medical Corps of the Confederate army and navy, returned to their desolate homes and resumed the practice of their profession, spoke words of cheer to their distressed countrymen, administered to the sufferings of the sick and wounded Confederate soldiers, and extended their noble and disinterested charities to the widows and orphans of their bereaved and distressed country.

Whilst political soldiers rose to power and wealth upon the shoulders of the sick and disabled soldiers of the Confederate Army, by sounding upon all occasions "*his war record,*" the modest veterans of the Medical Corps of the Confederate Army and Navy were content to serve their sick, wounded and distressed comrades, ask-

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ing and receiving no other reward than that "peace which passeth all understanding," which flows from the love of humanity, springing from a generous and undefiled heart. It is but just and right that a Roll of Honor should be formed of the band of medical heroes and veterans.

Magnitude of the Labors of the Medical Corps of the Confederate Army and Navy.

Some conception of the magnitude of the labors performed in field and hospital service, by the officers of the Medical Corps of the Confederate Army, may be formed by the considerations of the following general results.

Killed, Wounded and Prisoners of the Confederate Army.

Year.	Killed.	Wounded.	Prisoners.
1861	1,315	4,054	2,772
1862	18,582	68,659	48,300
1863	11,876	51,313	71,211
1864 } 1865 }	2,200	70,000	80,000
Total, 1861–5,	53,773	194,126	202,283

During the period of nineteen months, January, 1862, July 1863, inclusive, over one million cases of wounds and disease were entered upon the Confederate field reports, and over four hundred thousand cases of wounds upon the hospital reports. The number of cases of wounds and disease treated in the Confederate field and general hospitals, were, however greater during the following twenty-two months, ending April, 1865. It is safe to affirm, therefore, that more than three million cases of wounds and disease were cared for by the officers of the Medical Corps of the Confederate Army during the civil war of 1861–1865.

The figures, of course, do not indicate that the Confederacy had in the field an army approaching three millions and a half. On the contrary, the Confederate forces engaged during the war 1861–1865 did not exceed 600,000.

Each Confederate soldier, was, on an average, disabled for

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greater or lesser period, by wounds and sickness about six times during the war.

Losses of the Confederate Army, 1861–1865.

Confederate forces actively engaged during the war 1861–1865	600 000
Grand total deaths from battle, wounds and disease	200 000
Losses of Confederate Army in prisoners during the war on account of the policy of exchange adopted and enforced by the United States	200 000
Losses of the Confederate Army from discharges for disabilities from wounds and disease and desertion during the years 1861–1865	100 000

If this calculation be correct, one third of all the men actually engaged on the Confederate side were either killed outright on the field or died of disease and wounds; another third of the entire number were captured and held for indefinite periods prisoners of war; and of the remaining two hundred thousand, at least one half were lost to the service by discharges and desertion.

At the close of the war, then, the available army force in the field, and those fit for duty, numbered scarcely one hundred thousand men.

The great Army of Northern Virginia, surrendered by Gen'l. Robert E. Lee, on the 9th of April, 1865, could not muster ten thousand men fit for active warfare. Of this body of 600,000 men, 53,773, were killed outright, and 194,026 wounded on the battle field. One third of the entire Confederate Army was confided to the Confederate Surgeons for the treatment of battle wounds; and in addition to such gigantic services, the greater portion, if not the entire body of the 600,000 men were under the care of the Medical Department for the treatment of disease.

Well may it be said, that to the surgeons of the Medical Corps is due the credit of maintaining this host of troops in the field. Such records demonstrate, beyond dispute, the grand triumphs and glory of medicine, proving that the physician is the preserver and defender of armies during war.

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These records show that the medical profession, however indispensable in the economy of government during peace, become the basis of such economy during war. These statistics show the importance of medicine and its glorious triumphs, and elevate it logically to its true position in the estimation of not only the physician, but in that also of the warrior and statesman. The energy and patriotic bravery of the Confederate soldier are placed in a clear light when we regard the vast armies of the Federals to which they were opposed.

The whole number of troops mustered into the service of the Northern Army during the war of 1861–1865, was 2,789,-893, or about three times as large as the entire fighting population of the Confederate States. At the time of the surrender of the Confederate armies, and the close of active hostilities, the Federal force numbered 1,000,516 of all arms, officers and men, and equalled in number the entire fighting population of the Southern Confederacy.

Opposed to this immense army of one million of men, supplied with the best equipments and arms, and with the most abundant rations of food, the Confederate Government could oppose less than one hundred thousand war-worn and battle-scarred veterans, almost all of whom had, at some time, been wounded, and who had followed the desperate fortunes of the Confederacy for four years with scant supplies of rations, and almost without pay: and yet the spirit of the Confederate soldier remained proud and unbroken to the last charge, as was conclusively shown by the battles of Franklin and Nashville, Tennessee; the operations around Richmond and Petersburg; the last charge of the Army of Northern Virginia; the defense of Fort McAllister on the Ogeechee river in Georgia, where 250 Confederate soldiers, in an open earthwork, resisted the assaults of more than five thousand Federal troops, and never surrendered, but were cut down at their guns; at West Point, Georgia, where there was a similar disparity between the garrison and the assaulting corps, where the first and second in command were killed, and the Confederates cut down within the fort;

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the defense of Mobile in Alabama, and the battle of Bentonville in North Carolina.

Number of Officers and Roster of the Medical Corps of the Confederate Army and Navy.

The destruction by fire of the Medical and Surgical Records of the Confederate States, deposited in the Surgeon-General's office in Richmond, Virginia, in April, 1865, has rendered the preparation of a complete Roster of the Medical Corps very difficult, if not impossible.

A general estimate of the aggregate number of medical officers employed in the Medical Department of the Southern Confederacy may be determined by the number of commissioned officers in the Confederate Army down to the rank of Lieutenant-Colonel. Each regiment in the Confederate Army was entitled to one Colonel, one Surgeon, and one or two Assistant Surgeons, and a medical officer who was generally attached to each battalion of infantry, cavalry or artillery. Generals, Lieutenant-Generals, Major-Generals, and Brigadier-Generals, frequently, if not always, had attached to their staff Medical Directors, Inspectors, or Surgeons of Corps, Divisions and Brigades.

We gather the following figures from the elaborate and invaluable "Roster of General Officers, etc. in Confederate Service," prepared from official sources by Col. Charles C. Jones, Jr., of Augusta, Ga.:

Confederate States Army.

Generals	6
Provisional Army:	
Generals	2
Confederate States Army—Regular and Provisional:	
Lieutenant-Generals	21
Major-Generals	99
Brigadier-Generals	480
Colonels	1,319
Total	1,927

If it is to be estimated that, for each of these officers, one Surgeon and two Assistant Surgeons were appointed, and served in field and hospital, then the Confederate Medical Corps was composed of about the following:

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Surgeons	1,927	
Assistant Surgeons	3,854	
		5,781

This estimate places the number of Surgeons and Assistant Surgeons at too high a figure, as may be shown by the following considerations:

a. Many regiments and battalions had not more than two medical officers.

b. The casualties of war were much more numerous, and promotion was much more rapid, amongst the line officers than in the Medical Staff.

A more accurate estimate of the actual number of medical officers actively engaged in the Confederate Army during the war 1861–1865, may be based upon the number of regiments, battalions, and legions of infantry, cavalry, and artillery, furnished by the individual States during the civil war:

Total number of regiments infantry	519
cavalry	125
artillery	13
Total	657

These regiments were furnished by the individual States, as follows:

	Infantry.	*Cavalry.*	*Artillery.*
Alabama	57	3	
Arkansas	34	6	
Florida	9	3	
Georgia	65	11	
Kentucky	11	9	
Louisiana	34	1	1
Maryland	1		
Mississippi	51	4	1
Missouri	15	6	
North Carolina	58	6	4
South Carolina	33	7	5
Tennessee	67	12	
Texas	22	32	
Virginia	64	19	4
Confederate	8	6	
Total	519	125	13
Grand total regiments	657		

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Total number of battalions infantry	67
cavalry	28
artillery	50
Total	145
Total legions infantry	13
cavalry	3
artillery,	
Total,	16
Total battalions and legions,	161
Total regiments,	657
Total requirements, battalions and legions, comprising the Confederate Army during the war 1861–1865,	818

If one Surgeon and two Assistant Surgeons be allowed to each separate command actively engaged in the field during the civil war, 1861–1865, the numbers would be as follows:

Surgeons,	818
Assistant Surgeons,	1,636
Total,	2,454

The medical officers of the Confederate Navy numbered:

Surgeons,	22
Assistant Surgeons,	10
Passed Assistant Surgeons,	41
Total medical officers C. S. N.,	73

If to the above be added the Surgeons of the general hospitals, recruiting and conscript camps, the entire number of medical officers in the Confederate Army during the war 1861–1865 did not amount to 3,000.

The Surgeon-General of the United Confederate Veterans has endeavored to construct an accurate Roster from his labors in the field and hospital during the war, and from the official roll of the Confederate armies in the field, and thus far he has been able to record the names and rank of over one thousand Confederate Surgeons and Assistant Surgeons.

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The official list of the patrolled officers and men of the Army of Northern Virginia, surrendered by Gen. Robert E. Lee, April 9th, 1865, furnished 310 Surgeons and Assistant Surgeons.

The co-operation in this most important work is solicited from every surviving member of the Medical Corps of the Southern Confederacy.

When perfected, this Roster will be published as a roll of honor and deposited in the archives of the United Confederate Veterans.

11. *The Determination of the Number and Condition of the Surviving Confederate Soldiers who were Disabled by the Wounds and Diseases Received in the Defense of the Rights and Liberties of the Southern States.*

To accomplish this important and benevolent work, the following inquiries have been addressed to the Governors of the Southern States, namely: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, Virginia:

Circular No. 2.

OFFICE OF SURGEON-GENERAL,
UNITED CONFEDERATE VETERANS,
156 WASHINGTON AVENUE, 4TH DISTRICT,
New Orleans, La., February 9th, 1890.

To His Excellency Governor ———, *State of* ———:

The attention of your Excellency is respectfully directed to the fact that in the year 1889 the Association of the United Confederate Veterans was formed in New Orleans for historical, social and benevolent purposes. Our illustrious Commanding General, His Excellency General John B. Gordon, has ordered the assembling of the Confederate Veterans in Chattanooga, Tennessee, 3rd of July, 1890. The welfare of the United Confederate Veterans will be materially promoted if your Excellency will furnish the Surgeon-General with the following data:

1st. The number of troops furnished to the Confederate States by the State of ———.

2nd. Number of wounded during the civil war 1861-1865.

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3rd. Number of killed during the civil war 1861–1865.

4th. Number of deaths by wounds and disease.

5th. Number of Confederate survivors now living in the State of ———.

6th. The amount of moneys appropriated by the State of ——— for the relief and support of the survivors of the Confederate Army from the close of the civil war in 1865 to the present date, 1890.

7th. Name location and capacity of all establishments, hospitals or homes, devoted to the care of maimed, sick and indigent survivors of the Confederate States Army.

8th. A detailed statement of the moneys expended by the State of ——— for the support of the maimed, disabled and indigent survivors of the Confederate Army.

Respectfully,

Your obedient servant,

JOSEPH JONES, M. D.,

Surgeon-General United Confederate Veterans.

It was earnestly desired that prompt and full reports on the part of the Chief Executives of the Southern States would have enabled the Surgeon-General to place in the hands of the Commanding General of the United Confederate Veterans, at the first reunion on the 4th of July, 1890 full statistics of the number of disabled Confederate Veterans cared for by the individual States. But replies have been received from only six of the thirteen States of the late Confederacy, and in three of these States it appears that no official assistance has been rendered by the State authorities to the Confederate Veterans of 1861–1865.

The Southern States are morally bound to succor and support the men who were disabled by the wounds and disease received in their service, and the widows and orphans of those who fell in battle. The Confederate soldiers who engaged in the struggle for constitutional liberty and the right of self-government, were neither rebels nor traitors; they were true and brave men, who devoted their fortunes and their lives to the mothers who bore them, and their precious blood watered the hills, valleys and plains of their native States, and their bodies sleep in unknown graves, where they shall rest until the last great trumpet shall summon all alike, the conquered and the conqueror.

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The survivors have no government, with its hundreds of millions for pensions; in the loneliness and suffering of advancing years and increasing infirmities, they can look alone to the States which they served so faithfully in battle, in victory, or in defeat.

The noble soldiers who composed the illustrious armies of Northern Virginia and Tennessee made a gallant fight against overwhelming odds for what they believed to be sacred rights and constitutional liberty. The contest was decided by the sword against them.

These matchless soldiers accepted the issue in good faith; they returned to their homes, they resumed the avocations of peace, and engaged in building up the broken fortunes of family and country. These brave soldiers have discharged the *obligations of good and peaceful citizens as well as they had performed the duties of thorough soldiers on the battle-field.* It has been well said that no country ever produced braver or more intelligent and chivalric soldiers or more industrious, law-abiding and honorable citizens than were the soldiers who surrendered with the Confederate flag. The earth has never been watered by nobler or richer blood than that shed by those who fell beneath its folds.

I have the honor, General, to remain,

Your obedient servant,

JOSEPH JONES, M. D.,

Surgeon-General United Confederate Veterans.

Abuses of Dispensaries—Diagnosis of Tubercular Meningitis—Hydrophobic Inoculations—Autopsy of a Case of Hydrophobia.

Mr. Editor:—New York is a city whose charity is great and far-reaching. The sick and the friendless can readily find relief and succor. But the misapplication of its charities go very far to mar their usefulness. Now there is a cry of protest going up from the younger practitioners against the abuses of the *dispensary system.*

Such institutions are founded with laudable intent of re-

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lieving the indigent sick, but it is found that those who are really able to pay a physician's fee, and are in fairly good circumstances, and get wages that in the South would seem phenominal, are the ones who reap the benefits. This is especially true of the large dispensaries connected with the hospitals located in the better parts of the city. Every afternoon crowds of well-dressed people can be seen entering these places, many of them coming from a distance to be treated free.

This state of affairs, coupled withe the medical advice, so-called, so freely circulated through the columns of the newspapers, is making the lot of the young or the old practitioners for that matter, whose living is more or less dependent upon the one dollar fees, look gloomy. Recently one of the daily papers devoted nearly a page of its Sunday edition to the diagnosis and treatment of the commoner diseases. This is, of course, well enough, if done for the purpose of general information, as there is nothing occult about medicine. But the laymen will turn it to practical use to the undoing of the doctor. If this continues, we may confidently look forward to the day when the practitioners of medicine will be a world-wide brotherhood, and every man his own doctor.

At the recent meeting of the American Pediatric Association, Dr. W. P. Northrop, read an interesting paper on the "*Diagnosis of Tubercular Meningitis in Children.*" He gave four symptoms, which, when they existed together, were to him convincing evidence of the disease:—Persistent vomiting, irregular pulse, irregular breathing, apathy. There were also other significant symptoms connected with the organs of special sense.

Prof Jacobi agreed with Dr. Northrop in the importance of the persistent vomiting as a diagnostic sign. The vomiting is apt to be marked when the meninges of the base of the brain are the seat of the tubercular deposit; if the tubercular deposit not marked in this region, the vomiting is apt to be less pronounced or absent.

Distinction must be made between the cerebral type of

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vomiting, which is projectile and not accompanied by nausea, and that which is merely reflex or of gastric origin.

Dr. Northrop traced the infection in one of his cases reported to the use of tuberculous milk.

Dr. Paul, Gibier, President of the Pasteur Institute of this city, and a former assistant of Pasteur, described at a recent meeting of the New York County Medical Association, *the sensations experienced during a course of anti-hydrophobic inoculations.* He uses injections in which the percentage of virus progressively increased. The sensations were not very marked. There was a hyperæmia about the seat of injection. There was a slight general febrile movement, with slight mental excitement and confusion, an increased secretion of urine, and an excitation of the genito-spinal centre. This was followed by a hyperæsthesia of the skin. Dr. Gibier had repeatedly inoculated himself, and had treated with success, sixteen cases in this country. The subject of the inoculation is said to possess immunity against hydrophobia for about five years.

It may be interesting to note the result of an autopsy held at Bellevue hospital a few days ago upon the body of a man who died of hydrophobia. The body was that of a well-nourished muscular individual. The vessels of the dura mater were moderately congested, but otherwise normal. The pia mater was congested, and showed hæmorrhages into its meshes. The conformity of the hemispheres showed patches of extravasated blood. There was a hæmorrhage into the substance of the post central convolution. The brain was normal in consistence; the surface of the temporal lobes, however, were somewhat indurated. The roof of the lateral ventricle was congested. There were hæmorrhagic points in the fourth ventricle. The solid thoracic and abdominal organs showed venous hyperæmia, but were without gross lesions.

The microscopic examination of the cerebro-spinal axis has not yet been reported.

OCCASIONAL.

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Information Solicited about Cases.

[We take pleasure in introducing this department—to ask and answer questions about cases, etc. If subscribers will utilize it, they can make this department valuable.—EDITOR.]

Mr. Editor:—Allow me to trespass on your time for a moment.

I have a patient with *rickets*, two years of age, whose long bones have not ossified in the middle spine all right; cannot stand up; much of lower extremities atrophied. The impending danger to life arises from the fact that the spinal extremities of the ribs are not strong enough to support the chest walls, which collapse laterally at each inspiration, cramping the lungs and heart. The antero-posterior diameter of the chest is much increased.

I wish that you would inform me if there is any surgical appliance that might of be use in the case.

SECOND CASE.—A boy (white), twelve years of age, died a few days since with the following symptoms: After working in the field all the day before, which work required constant stooping, he complained of great soreness in the muscles of his back, difficulty of deglutition and articulation, nausea and disordered vision; his mind was clear; bowels costive. I saw him two days after the attack. There was great prostration of all the vital forces, pulse 130 and weak; skin cool and inclined to perspire; no headache at any time; no rigidity or contraction of cervical muscles; mucus clogged the throat; the muscles subservient to deglutition seemed paralysed. He continued to grow worse, and died on the sixth day of illness. Was this meningitis of the base of brain? If not, what was it? Any information on above will be appreciated.

R. C. BOWLES, M. D.

Kent's Store, Va., June 17th.

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Original Translations.

From the German. By MOSES D. HOGE, JR., M. D., Richmond, Va.

Traumatic Neuroses.

The following are the views held on this question by Strumpell (*Rundschau.*) 1. After a violent shock, the crises, frequently are a complicated, but well characterized complex of nervous symptoms, which is best called general traumatic neurosis. Its appearance is similar to neurasthenia, sometimes to hysteria and certain psychoses (melancholia and hypochondria). Its cause is, in a great measure, due to the great excitement of the moment, but the lasting results of a material concussion, which are not of a demonstrable character, must also be taken into account. 2. Traumatism acting locally, especially on the extremities, produces sometimes a severe nervous disturbance in the affected part, which presents points of similarity to hysteria. Those nervous diseases are called hysterical, which, in a restricted sense, show a lack of normal uniformity between the bodily and psychical efforts. 3. Sharp distinction between a general and local neurosis can not always be made; transitions and combinations frequently occur. 4. Combinations also exist between real anatomico-traumatic lesions and traumatic-neurotic symptoms, a circumstance of diagnostic importance. 5. Finally, sometimes general traumatic neuroses furnish a starting point for the development later of organic diseases, such as paralyses tumors, etc.

A New Test for Albumen in Urine.

The following tests have been published by Zouchlos (*Rundschau*, 1890,) and is recommended on account of its simplicity and accuracy. A solution of one part of acetic acid, and six parts of one per cent. solution of corrosive sublimate is prepared; to this the suspected urine is slowly added, which at once produces a distinct cloudiness. This test is not affected by peptones, uric acid, or the phosphates.

A still more delicate test than the above has also been proposed by Zouchlos. Three ounces of a ten per cent. solution of rhodium potash, with six drachms of acetic acid; of this a few drops is added to the suspected urine. If albumen is present, there is at once formed a distinct cloudiness, which is insoluble in excess of the solution.

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Hypnol.

Dr. Bardet has given this name to a new hypnotic which is an oily mass at first, but soon throws down tasteless and odorless white crystals. It is made by adding chloral to a solution of antipyrine Its chemical constitution is trichlora-cetyl-di-me-thyl-phenyl. It has a decided sleep-producing effect, and among other advantages, it does not cause gastric disturbances as chloral. It has been found peculiarly applicable to patients suffering from phthisis pulmonalis. While producing a pleasant and refreshing sleep, it banishes the fever. It has also proven a valuable remedy in neuralgia.—(*Rundschau*, 1890.)

New Antiseptic Dressing—without Bandages.

As Socin well says, (*Rundschau*, 1890,) there are a great many parts of the body in which it is very difficult to put on a good dressing with bandages, as, for example, in hare-lip and wounds on the cheek. To overcome this difficulty he uses a paste made of equal parts of chloride of zinc and oxide of zinc, with water. It is best to make it only for each special occasion. The wound is made antiseptic, thoroughly dried, and the paste applied with a camel's-hair brush. It dries in a few minutes, making a firm, dry crust. Under its protection the wound generally heals in four or five days by first intention, without causing any irritation to the healthy skin.

Simple Method of Examining the Posterior Wall of the Larynx and Trachea.

The examination is made by pressing against the velum a rather large mirror, with the head bent well forward The patient stands up and the operator either sits or kneels before him, in order to examine in as vertical a manner as possible. By this method, Kilian (*Centralbl. f. Chir.*) was able to obtain a full view of the trachea in eighty-six out of one-hundred cases, which by the old method was only possible in eleven.

Am prescribing Tongaline with satisfactory results. For the indefinite aches and pains of nervous patients, it is *superior to any other anodyne.* For Nervous Headache or Muscular Rheumatism it is almost a specific.

PARK RITCHIE, M. D., St. Paul, Minn.

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Proceedings of Societies, Boards, etc

MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA.

FIRST DAY.—The Twenty-third Annual Session of this Society convened in City Hall, Wheeling, W. Va., at 2 P. M. In the absence of the President of the Society (Dr. S. H. Austin, of Lewisburg, W. Va.), and of all the Vice-Presidents, Dr. L. D. Wilson, of Wheeling, W. Va. (who was President last year), was elected to serve as such *pro tem.* The Secretary, Dr. J. L. Fullerton, of Charleston, W. Va., was at his desk. Dr. Reed Baird, of Wheeling, was elected Treasurer *pro tem.* until Dr. J. A. Campbell, of Wheeling, might arrive.

After prayer by Rev. Dr. J. T. McClure, of the United Presbyterian Church, Dr. A. F. Stifel, of Wheeling, Chairman of the Local Committee of Arrangements, delivered an *Address of Welcome*, in which he recounted the meeting of the call of physicians, etc., mostly of Wheeling, in 1887, for a Convention in that city for the organization of the present Society. His other remarks were instructive, suggestive, and interesting, while the welcome given was very cordial. Among the provisions which his Committee had made was that of the free use of the city street cars by all members and delegates who might wear badges indicative of such membership during the session of the Society.

After reports of the Secretary, of the Treasurer, and some routine appointments had been made, Dr. C. F. Ulrich, of Wheeling, read a paper on *Some of the Vagaries of the Grip.* The paper described the epidemic of last winter, and presented some valuable suggestions as to diagnosis, treatment, etc., of this disease.

After the reception and response to a telegram of fraternal greeting from the Medical Society of Pennsylvania—now in session in Pittsburg, Pa.—and as none of the authors of papers were ready with their manuscripts, the Society adjourned.

At 8 *P. M.*, a most enjoyable excursion was had by rail to Benwood, where the operations of making iron and steel, rolling plates, and making steel pipe, etc., were explained by the managers of the Riverside Iron Works.

SECOND DAY.—After the election of new members, Dr. A.

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L. Hupp, of Cherry Camp, W. Va., who had lost his membership by reason of living out of the State for over three years, was restored to membership.

Dr. T. A. Harris, of Parkersburg, read a report on

Food Adulterations.

He was opposed to the sale of articles of food under false names, to adulterations, etc.

The twentieth section of the health law of this State says:

"If a person fraudulently adulterates, for the purpose of sale, anything intended for food or drink, or if he knowingly sell or barter anything intended for food or drink, which is not what it is represented to be, or what it is sold for, he shall be confined in jail not more than one year, and fined not exceeding five hundred dollars, and the adulterated or other articles shall be forfeited or destroyed."

This is the law; yet, who will claim that it is not violated every day, both in regard to articles of food and drink? His plea is not for the suppression of the sale of any healthful article of food or drink, but that they shall be sold for just what they are, and that the people shall be protected against the adulteration of articles of food or drink with matters hurtful to health, and that they shall be allowed to use an intelligent choice in the use of articles made from materials not hurtful or unwholesome.

Of the spices upon the market, it is doubtful if one can be found in the list of "ground spices" which is not adulterated—if not with articles hurtful to the health, at least with inert matter. Again, in the liquors sold as beverages, who can measure the adulteration of the wines, whiskeys, and beers, and tell us the compounds which are sold under the name of "pure liquors?" One other article in common use is cow's milk. It is often adulterated by unscrupulous dealers with such harmless matters as water and chalk, which practice should be prevented. But it is not to this kind of adulteration which we refer, for it must be borne in mind that there is no article of food which so quickly absorbs hurtful as well as harmless odors and gases. Milk is open to the charge of having been the means of communicating cases of scarlet fever and typhoid fever in more than one instance, if not other diseases. By changes and decomposition within itself, and thereby the generation of poisonous agents, it has been charged with the production of a large proportion of the cases of summer complaint in chil-

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dren. Recent investigations leave no room to doubt the communicability of tuberculosis from tuberculous cows to the users of the milk, nor is there room to doubt the prevalence of tuberculosis among domestic cattle, particularly the finer breeds. For this contamination of the milk it is not necessary that the disease shall be located in any particular organ of the animal. When we remember that one-seventh of the deaths of individuals over five years of age is caused by consumption, and when we think that this disease is coterminous with the use of domestic cattle, the subject opens formidable proportions. His argument is not against the use of milk as an article of food, but is a plea for the taking of every precaution against its contamination or infection with diseased germs hurtful to its user; and for such examination and inspection, not only of the milk itself, but also of the animals furnishing it, as will insure a pure and healthful article for use by the sick and the well.

Dr. James Putney read the *Report on New Remedies*, which elicited remarks by Drs. Harris, Hood, Jefferson, Wilson, Hall, Shields, Brownell, Curtis, Mayer, Burwell, Hildreth, Dickey, and John Frissell. At the end of the discussion, the Convention adjourned until 2 P. M.

When the *Afternoon Session* was formally opened, Dr. S. L. Jepson introduced Dr. John B. Hamilton, Chief of the Marine Hospital Service, and on motion of Dr. Stifel, Dr. Hamilton was elected an honorary member of the Society, in response to which Dr. Hamilton returned his thanks.

Voluntary papers were called for. Dr. Lester Keller read a paper upon "*Non-Controllable Vomiting in Pregnancy.*"

Dr. Keller has given the subject special study, and marshalled in his paper a large number of very valuable points, from a consideration of which he made deductions based upon his individual experience. He cited from cases coming under his notice, and in one of these he said the patient vomited 125 times in twenty-four hours, by actual count. The patient was reduced to 68 pounds, and lost every hair from her head, yet made a complete recovery. The same patient had a renewal of the trouble on again becoming pregnant, but made a more rapid recovery, and had still more modified symptoms upon becoming pregnant a third time. Cases 3 and 4, cited by the Doctor, were of equal interest, recoveries taking place in all instances.

The discussion was opened by Dr. Aschman. Dr. S. L. Jepson also made some remarks, citing a case coming within his own notice, which he saw through consultation.

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The Doctor followed his remarks with his paper upon "*Two Cases of Atresia of the Vagina*," both cases being from neighboring towns.

The discussion following was led by Dr. Harris, who cited some most interesting cases in his own practice.

Dr. E. H. Fravel's paper, on "*Cases of Retro-Bulbar Neuritis*," was next read, the author citing several cases of considerable interest.

The Society, with their guests and many ladies, spent the remainder of the afternoon on an excursion.

At night, Dr. John B. Hamilton, of Washington, D. C., Surgeon-General U. S. Marine Hospital Service, delivered a lecture on

Physical Culture—Ancient and Modern.

After some well-timed introductory remarks of special local interest, he stated that within a few years there has been a great awakening in America on the subject of physical education. It had begun to be apparent that, with all our boasted progress and wisdom in general intelligence, arts, and sciences, we had omitted from our curriculum anything having for its object the systematic training of the body. The body cannot become a perfectly working machine without culture or training any more than the mind can become intellectually expert without that drill which we call education.

It is not a pessimistic view of the case to consider that one-fourth of our population, of military age, could not pass a physical examination as recruits, and a majority of persons thus disqualified have become so from neglect of muscular exercise. The hollow-chested consumptive was not long since the type of the scholar, and the moral of this lesson was to teach people to avoid schools, for fear of the production of physical deformity or imbecility. It was this feeling that college graduates were unfitted to deal with the rough elements of daily life in the world, that brought about the changed sentiment whereby our colleges now encourage manly sports and exercises. Yet none of our private or public primary schools devote any appreciable time to the cultivation of sound bodies. Our primary education should begin with training the muscles, the nerves, the eye, the ear and the hand at the same time we commence to stimulate the brain precept.

The speaker then proceeded to give a complete history of

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the Grecian sports and their effect, and said that the physical welfare of the people has been one of the chief cares of States since the organization of governments among men, and it has been found that when the largest physical types of man existed, then also were found examples of the highest types of the human intellect. He spoke at length of the Grecian, Roman, and Spartan sports and games, and showed that when they became neglected, these countries lost their great power and supremacy. He spoke of the splendors of the tournament of the Middle Ages, and came on down to modern physical training.

At the beginning of this century efforts were more or less successfully made in numerous countries to introduce gymnastics into the primary schools and the family, and the speaker proceeded to give a history of the organization of "turn schools" in Germany by Father John about the year 1810, at a time when the physical degeneration of the people of that country had become very marked, and he thought it was questionable if the present revival of interest in physical training in America is not due to the establishment of the American "turn societies."

Dr. Hamilton proceeded to tell how the "turners" became too strong in Germany, and, conscious of their strength, becoming too bold in their political sentiments, an official war was declared against them, in 1818 the "turn places" were closed, and in 1819 Father John was arrested as a demagogue, "turning" being forbidden throughout Prussia in 1820. In 1837, "turning" was again allowed, and in 1840 John was unconditionally released, and just before Christmas he received from King Frederick IV the order of the Iron Cross of the second class. The "turn schools" grew and grew until so well established in popular favor that by a ministerial decree, January 7th, 1844, obligatory "turning" was introduced into the common schools of Prussia, and two years later turn schools for females were established.

The precipitation of the Revolution in 1848 resulted in the exile of many of the leading turners, their emigration to America, and the foundation of turn societies in Cincinnati and New York, and later in other cities, until now there are more than 30,000 turners in the United States, and about 260 turn societies. Their watchword is still liberty and education for all, and I am convinced that their influence is for the welfare of our common country.

It is at this time a patriotic duty to form gymnastic schools and athletic clubs, and, by all means at our com-

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mand, stay the physical degeneration that is destroying our American manhood and womanhood. The colleges are doing their utmost, gymnasia are being equipped everywhere, and youths leaving college may now find in nearly every city a well-furnished athletic club.

But what are we doing for the young children? A few Western schools, under the directly stimulating examples of the athletic clubs, have begun to establish gymnasia in connection with the regular instruction of the school, and paid teachers of gymnastics have begun to be employed. The primary school should be the place where the body is made to grow straight; where all the muscles are exercised properly, and where the young, tender brain is nourished by blood made healthy through active circulation. At the preparatory school the youth begins his classics, his mathematics and physics, and why should he not also begin his physical training at the preparatory? Not only would the results be more perfect when this commenced, but when we remember that the majority of youth do not enter college at all, we then realize that unless the primary school be made the place of beginning, the work is never commenced.

When one sees sickly, stoop-shouldered, knock-kneed, feeble children attempting to become educated men and women, there is no longer reason to wonder at the marvellous increase of our insane. This is largely the result of physical degeneration, as shown in flabby muscles, disinclination to exercise, and unhealthy blood. We want no class improvement, but we want universal attention to physical training from childhood to adult life, and until the State Governments take up the matter as a patriotic duty we must encourage the private gymnasia.

Let us have the highest types of beauty, deftness and strength combined with mental and chivalrous virtue. Let us have women like her of whom the poet said, "Grace was in all her steps, heaven in her eye: in every gesture dignity and love." Let us have strong men. Your strong, healthy, vigorous man is never irritable, never "nervous," he is generous, and he sleeps at night. He lives, and the world is better that he lives.

The close of the Doctor's lecture was greeted with generous applause.

THIRD DAY—*Morning.*—Dr. W. H. Sharp read a paper on *Cases of Fracture of the Skull in Children;* and also reported a *Case of Atresia of the Uterus.*

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Dr. T. B. Camden read a report of a *Case of Fatal Burning by Spontaneous Combustion* [?]

Dr. C. F. Ulrich, of Wheeling, W. Va., read a paper on

Preventive Medicine, and the Physician of the Future.

He said that there seems to be a general awakening all over the civilized world on the subject of sanitation, which means the cultivation of such a condition of our physical surroundings as to prevent disease. Health Boards are being organized in town and country; complicated Boards of Health are established in the large cities, and a national institution of the same kind has sprung into existence. The old adage, "an ounce of prevention is better than a pound of cure," has found its way among the doctors, and is making a decided revolution in the nature and character of the physician's calling. Formerly the advent of disease was looked upon as an unavoidable visitation of Providence, and no attempt was made to keep it off. In fact, efforts of that kind were regarded by the over-pious as an interference with the Divine plans. He has known stout resistance to be made to the use of anæsthetics in midwifery, because it was announced that any attempt to remove the curse pronounced against Eve, that she should suffer pain in bearing children, was flying in the face of Providence, and consequently sinful. Of course such argument is confined to the ignorant and superstitious, yet even among medical men we find some who are opposed to too much sanitation, lest Disease should be compelled to fold his arms and explain in dolorous voice, "Othello's occupation is gone," while many, though not in principle, opposed to sanitation, nevertheless hold themselves aloof, and make no effort to promote the public health, because they do not see in it any remuneration. Instead of dividing disease into curable and incurable, as has heretofore been done, we are beginning to divide them into preventable and non-preventable. The more we investigate disease, its etiology and character, the larger we find the former class, and the smaller the latter. Avoidable disease and premature death are still rampant among us. Ignorance and short-sighted selfishness still abound in the medical profession, which ought to consist only of intelligent, thoroughly trained, and noble hearted men. We are still so much in the dark concerning the etiology of disease that we make but little progress in preventing its inception and development. It should be the duty of every honest physician to do all in his power to educate the public up to the understanding and hearty support of all measures looking to the

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proximate solution of all preventable disease, and placing those which cannot be prevented under such sanitary restrictions as to reduce their force and number to a minimum. Here lies the true work of the physician. The treatment and cure of disease is, to a great extent, empirical, frequently founded on a false theory, which has a short life and is finally exploded. But in the prevention of disease by the destruction of germs, through the purification of the vehicles that carry them, such as the air in dwellings and the drinking water, which, though intended for the maintenance of life, sometimes teem with the seeds of death, the physician finds a field of labor worthy of the higher order of intellect which should characterize every member of the profession.

Dr. T. A. Harris followed with a paper on "*Some Abdominal Surgery*," which specified some carefully considered observations.

Dr. T. C. M. Floyd, of Ohio, presented his credentials, and was admitted.

During the Afternoon, Dr. C. B. Blubaugh read a paper on *Bident Operation for the Extraction of the Dislocated Crystalline Lens.*

Dr. T. B. Camden read a paper on

A Case of Diphtheritic Croup,

Describing his treatment, etc. A discussion followed led by Dr. Stifel, who narrated several cases coming under his treatment. He was followed by Dr. S. L. Jepson.

Dr. L. D. Wilson, of Wheeling, President *pro tem.*, had seen several cases of recovery without an operation, but none after an operation, and his experience and observations were not such as to lead him to place much value upon a resort to surgery, except as a means of slightly prolonging life. He did not believe in saturating the air of a sick-room with lime-water or other vapor; believed pure, dry air was the best. He wanted to protest against shutting up a room, saturating the air, etc. Such an atmosphere was hard on a well person, and must be harder still on one sick, and struggling for the proper inflation of lungs. The Doctor was frequently interrupted by questions from his hearers, and quite a discussion followed.

Dr. Sharp was a firm believer in the efficacy of heat and moisture, and Dr. Jepson reiterated his beliefs, in some forceful remarks. He did not feel disposed to summarily break away from long established practice, universally recognized

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by the profession, both in its oral teaching and in its literature.

Dr. A. F. Stifel read a paper on *The Reciprocal Relations of Mind and Body in Disease.*

Dr. Harden presented a paper on *Abscess of the Liver.*

Dr. Aschman presented one on *Glaucoma.*

Dr. Hogue of Charleston, presented some *Obstetric Notes and Conjectures.*

Contract Surgeons as Established by Railroad and Other Corporations

Was the subject brought up by Dr. W. H. Sharp. He spoke feelingly upon the subject. He thought the evil was one calling for prompt action. He gave an instance where the value of services rendered to railroad men in Parkersburg, in the month of May, would have been $250 if given private individuals, and the only compensation was a pass on a portion of the road. Physicians were prohibited from contracting with families at so much per year, and why not apply the same rule to corporations? There was no reason why a leg should be taken off, on a corporation contract, for a trifle, while a private individual had to pay $100 or $150. He offered the following resolution:

Resolved, That this Society appoint a committee to act during the recess of the Society, and take such steps as will be necessary to bring to the attention of societies of adjoining States and the American Medical Association, the relations assumed by railroad corporations in establishing systems of contract surgeons, and the rules adopted for the government of their surgeons, which are contrary to the spirit and letter of the code of ethics; and the small compensation given for such unlimited services, detrimental to the general interest of the profession, lowering the value of the services of the profession.

Dr. Campbell thought the Society could not legislate properly upon the matter. The thing ought to go to the Legislature of the State, or to the General Government. He was opposed to picking out railroad companies. If the matter was to be gone into, there was the General Government using contract service, and every county, town, and village did the same thing.

Dr. Mayer did not think it politic. There were five or six railroad surgeons in the meeting, and the matter would not be settled in a week. The Society could not legislate for the railroad companies, and those companies would always find men to do the work, no matter what the Society might say.

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He thought the best thing the Society could do would be to drop the matter. The speaker was not a railroad doctor, but he did not, nevertheless, see the policy of driving railroad doctors, now in the Society, out of it, or keeping some now out of the Society forever outside its pale, when they ought to be in the organization. He wanted all the best physicians in the State in the Society, and he wanted the members of the Society to do the corporation work, (some of which paid big,) rather than non-members.

Dr. George Baird favored the resolution.

Dr. Harris said the Society ought to have a business side, and look after the interest of its members. The organization ought to do all in its power to make the profession throughout the State feel the Society was a business-like and practical organization, as well as a social and scientific one. He was not in favor of rabid or injudicious action, but he was in favor of action which would commend itself to the profession both in and without the State.

Dr. Dickey—I am opposed to the resolution, and shall vote against it.

Dr. George Baird—Are you a B. & O. surgeon?

Dr. Dickey—Yes. [Applause.]

Dr. Dickey went on and spoke earnestly on the subject. He said the corporation business was "too extensive to monkey with," and it would only be "monkeying" with it for this Society to attempt to legislate. The subject was one which would touch up too many private contracts, and there was not a man on the floor who had not a contract of some kind. The resolution was an attempt to interfere with private business. If a physician got no money on a contract, it was all right; if he got a pass, it was all right.

Dr. Keller said he was a railroad surgeon and a coal company surgeon, and he was well satisfied. If the Society was not satisfied, his resignation and the resignation of others he knew of could be obtained.

Dr. Camden favored the resolution. Let a physican be sent for in a railroad accident. Just as soon as a company physician appears, the doctor first sent for must step down and out, no matter what the circumstances.

Dr. Shriver said it was "best to let a sleeping dog lie;" don't stir up the animals. It was a matter "the Society dare not touch, because a lion is larger than a cat, and the railroad corporations are the lions."

Dr. George Baird pointed out that the resolution only called for an inquiry, and he failed to see what harm could result from it.

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The resolution was then put on its passage, and the ayes and nays demanded. The vote stood, ayes 31, nays 13.

The Chair appointed Drs. W. H. Sharp, A. F. Stifel, L. Keller, J. H. Brownfield and C. Shriver the committee.

Dr. Campbell then offered a resolution of the same general tone of Dr. Sharp's, but applying to the National and State Government, counties, towns, and all corporations of whatever nature requiring medical or surgical aid. It was laid on the table.

Officers were Elected as follows:

President—Dr. J. H. Brownfield, of Fairmont.

Vice-Presidents—First, Dr. D. Mayer, of Charleston. Second, Dr. T. B. Camden, of Parkersburg. Third, Dr. Lester Keller, Beury.

Secretary—Dr. J. L. Fullerton, Charleston.

Treasurer—Dr. J. A. Campbell, of Wheeling.

Board of Censors—Drs. Sharp, Shriver, Moss, Hall, Stifel, Wilson and Cooke.

Place of Next Meeting—Fairmont.

Committee of Arrangements—Dr. L. Carr and the physicians at Fairmont, members of the Society.

Adjourned *sine die.*

Banquet at night.

Dr. L. D. Wilson, who presided throughout this session until the new officers were installed on the last day, is especially commended by the newspapers as a fine parliamentarian, and an excellent and impartial presiding officer.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

[J. W. HENSON, M. D., Reporter.]

May 27th, 1890.—**Foreign Body Expelled from Nose of a Child.**

The President, Dr. Wm. W. Parker, exhibited a specimen resembling wood coated with calcareous matter, the whole about the size of a bicuspid tooth—which a child ten years old had expelled from his nose in the act of sneezing, its presence there having been known for seven years.

Normal Pulse in Malarial Fever.

Dr. R. D. Garcin observed in a case of malarial fever, (girl of 18 years), one evening, temperature 101°, pulse being normal. He had given no heart sedatives.

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Salol in Dysentery.

Dr. Aaron Jeffery having used salol in several cases of dysentery, reported very flattering results. Having failed with the ordinary treatments of the disease, he ordered salol in powder, ten grains every three hours, with the result of disappearance of blood and mucus from the discharges in about twenty-four hours.

Dr. Landon B. Edwards had been using salol with satisfaction in dysentery since his attention had been specially called to its virtue by Dr. W. P. Nicolson, of Atlanta.

The *condition of pulse and temperature* referred to by Dr. Garcin, was common in typho-malarial forms. He had observed in a recent case of typho-malarial fever in a young man, a pulse of only 60 or 65, while the temperature ranged from 101° to 103°—probably being no higher because of the effect of antipyretics he used. The condition of pulse was so peculiar as to suggest idiosyncrasy, but examination after recovery discovered a normal rate.

Salines in Peritonitis and Typho-Malarial Fever.

Dr. Edwards also said, there has been hesitation in using salines in these conditions from lack of accuracy in differentiating typhoid and typho-malarial affections. If it is clearly typho-malarial fever, a mercurial cholagogue should be first used, and then if moderate saline treatment is adopted along with the use of such agents as phenacetin, antipyrin, etc., a decided shortening of the duration of typho-malarial fever would result. Of course judgment should be exercised as to whether this or that is a suitable case. He did not positively advocate this plan, but suggested it as a result of some experiences which he related. The salines—such as Epsom salts—were used for their derivative effect. Fluid diet was as essensial as medicines.

In using the antipyretics he had guarded them with heart tonics, such as strophanthus and digitalis.

In reference to the abnormal relation of pulse and temperature, Dr. Parker had observed the *pulse as low as* 30 in some cases of typho-malaria.

Dr. O. A. Crenshaw stated, in reference to Dr. Edwards' remarks, that the *treatment of typhoid fever* in 1845, was purgatives and venesection. He believed that typho-malarial fever, so called, was nothing but typhoid fever modified by malarial poison as a result of the unfortunate hygienic conditions in our cities. Yet, while in typhoid fever, no purgatives should be used, in typho-malarial fever he fol-

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lowed the plan of purgatives in the beginning, and quinine afterward.

Antipyrin in Malarial Fever.

Dr. Garcin had noticed that antipyrin controlled temperature of malarial fever only while it is being administered.

Antipyrin in Typhoid Fever.

Dr. Jeffery had found that in typhoid fever antipyrin reduced temperatture for the first few days, but afterwards had no effect. He thought the drug not only two depressing to be safe, but that it did great harm in suddenly reducing high temperature, thus obscuring the true nature of the disease.

Dr. T. J. Moore, in reference to the saline treatment suggested by Dr. Edwards, asked if the natural history of these diseases had not been overlooked? The history of typhoid and typho-malarial fever showed that they would run their course. He would, therefore, suggest palliative treatment. He didn't like to tamper with new remedies until they had been proved of value. When there was a tendency to ulceration of the bowel in typho-malarial fever, the use of salines might set up a diarrhœa which it would be difficult to control. Quiet had been found very necessary in such conditions.

In reference to peritonitis, salines might be resorted to where there was a pouring out of serum but not genuine pus. Wegner and others had recommended the use of salines to stimulate absorption, where there was exudation of bloody serum, but not true peritonitis.

Dr. Edwards feared he might have been misunderstood. If the case was *typhoid* fever he would not use salines. But in *typho-malarial* or bilious remittent fever—the fever so prevalent in this city, and which looks like, and is everywhere spoken of as typho-malarial—with a bilious furred tongue and constipated bowels, saline might be used.

Prolonged Effect of Sulphonal as a Hypnotic.

Dr. Jeffery reported the case of a lady who after taking 30 grains of sulphonal, slept from 6 P. M. on Saturday, until 10 A. M. Sunday; then after an hour or two for breakfast, again slept until 4 P. M., and again from supper until the following morning. This was the only case in which he had observed such prolonged effect, although he had used the drug with success in various classes of wakefulness.

Dr. Crenshaw thought sulphonal an unreliable hypnotic.

Dr. Parker had seen one case in which it seemed depressing.

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Diabetes.

Dr. T. J. Moore said the two conditions under which sugar exists in the urine, are known as diabetes mellitus and glycosuria. The first is characterized by the constant and persistent presence of sugar in greater or less quantities; the second is a transitory condition where sugar makes its appearance for the time, but sooner or later disappears. In the *former*, diet of a proper nature alone will either greatly reduce the amount of sugar passed per day, or will cause it to disappear during the time the diet is continued—to return, however, when it is left off.

As to causes of diabetes mellitus, heredity plays a conspicuous part; it is liable to continue in the family for three or four generations. Mental emotions, nervous disturbances of all kinds, such as want, deprivation, exposure to cold, may give rise to it. Any irritation affecting the floor of the fourth ventricle—central lesions and pathological changes in the vicinity of this region, frequently cause it—such as tumors, serous effusion, hæmorrhage, red and white softening, gummata, and intersticial changes of nervous matter; gout, rheumatism, rheumatoid arthritis, pneumonia, typhoid and scarlet fevers, are said at times to predispose to, if they do not directly induce it. Abstinence from animal, and confinement to starchy foods, is asserted by a certain class of authors to give genesis to it; but statistics will not sustain this declaration. Vegetarians and the residents of hot climates, who subsist mainly on vegetable diet, are not specially prone to it.

It is generally a disease of adult life—a limited percentage, however, occurring in children from five years of age upward.

To enumerate the causes of *glycosuria* would necessitate repetition. Carbonic oxide, chloroform, ether, alcohol, strychnine, morphine, and the ingestion of large quantities of mineral acids—phosphoric especially—have been known to give rise to it. Uric acid in the gouty will likewise produce it. Anæmia following malaria, rheumatism, cholera, or prolonged lactation, have caused it. Abnormal conditions of the digestive tract and congestion of the pancreas sometimes cause glycosuria. Overwork, anxiety, and morbid mental disturbance occasionally produce it. Women undergoing change of life and broken down aged people are liable to it.

It is difficult to determine at first which of these conditions exists. In time the frequent examination of urine will alone solve the problem.

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Several of the conditions above enumerated as producing glycosuria will likewise produce diabetes mellitus.

In the latter disease, the range of the thermometer is peculiarly interesting. It is quite often as low as 93°—more often 97° and 97½°. The specific gravity of the urine is heavy, frequently ranging from 1028 to 1045.

The diurnal quantity of urine ranges from 6 to 30 pints, with a general average of 6 to 12 pints, and of sugar from 3 ounces to a half pound. Uric acid, hippuric, and phosphoric, the lime and potash salts (oxalate of lime in particular), and albumen, have all been found as accompaniments.

The disease is an insidious one, often accidentally discovered in a general examination of urine.

The impression is prevalent that in true diabetes the career of one so affected is necessarily short. Severe cases occurring in the weak, aged, or generally broken down, will average about two years. Under more favorable conditions patients will live 10 to 20 years.

The appetite is voracious and difficult to satisfy. Thirst is continuous.

As to *morbid anatomy*, the liver is most frequently congested without structural change. The kidney is congested, punctated, and its epithelial cells fatty. The anatomical changes are confined to the convoluted portions of the tubules. The sacculated condition of the kidney is an occasional accompaniment. The heart is usually feeble, and there is an increase of the watery element of the blood, with increase and disintegration of the red corpuscles.

Reflex disturbances are prominent. Neuralgia in brachial, femoral, dorsal, epigastric, and other regions, is common. The skin is dry, harsh, and rough, with a yellowish tint. The mucous membranes are congested. The tongue is often red, streaked, and covered with thick tenacious mucus. Sweating is common, with certain anatomical peculiarities. Often one side, a limb, the soles of the feet, or the palms of the hands, will alone be affected. Œdema of the extremities towards the termination of the disease is quite common.

Death comes about in various ways. Exhaustion and secondary lung complications are some of them; chronic pneumonia, without tubercular deposit, is a fertile source. Patients occasionally fall into coma, and thus pass away.

During the course of the disease various skin eruptions make their appearance—often in groups. Lichen, impetigo, eczema, furuncles, carbuncles, and gangrene, are all found at times. Where the latter appears, speedy death is almost

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inevitable. Gangrene of lung occasionally carries off the patient.

No satisfactory treatment of diabetes mellitus has been discovered. The best results have been obtained from the plan recommended by Dr. Banting for the reduction of obesity, with the addition of gluten biscuit, or those made from almond flour. It requires 24 to 48 hours first to find out the quantity of sugar in the urine. Then, having put the patient upon the above diet, the urine should be examined in two weeks to observe progress. If sugar is reduced one-half at the end of three or four months, moderate success is being obtained. As to medicines, opium has seemed beneficial. The active principle codeia has been suggested. Mr. Ralph recommended the bi-meconate of morphia. It is best to use the drug tentatively. Instead of several times a day, administer a fair dose at night, and let it be afterwards increased, if necessary. The opium habit is apparently not liable to be contracted by these patients.

Bromides and salicylates have also been used, and phosphorus, when there is a distinctly nervous element in the disease; acids and pepsin are given when indigestion is present. Steam baths and hot douches are beneficial for their effect upon the skin.

But whatever be the plan of treatment adopted, it will likely disappoint in most cases. Those improving rapidly and readily most probably have glycosuria, which will be relieved any way.

As to physiology, it is supposed that some congestion or irritation of the liver either interferes with the action of the cells, thus allowing the sugar to pass through unchanged, or else causes an overstimulation of said cells, resulting in over-action of the sugar-producing function.

Dr. Crenshaw recommended Wahkesha Springs for diabetes. He said that the Bishop of Canada had been apparently cured, and many others greatly benefitted, by this water. Siluria and Bethesda waters were also used. Carlsbad water would probably benefit dyspeptic cases; opium those in which brain symptoms were manifested He, however, didn't believe true diabetes mellitus could be cured.

Dr. Edwards mentioned that Balmano Squire, of England, had recommended phosphorus as something of a specific cure for diabetes. Squire had prescribed phosphorus for a skin eruption upon a patient who also had glycosuria. The effect was a cure of both. If there was any one remedy in the form of a drug, it would seem to be phosphorus. He thought benefit was often derived from the use of some of

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the various Springs water. Some years ago he prescribed Buffalo Lithia Water for a minister of distinction afflicted with diabetes. He was so greatly benefitted for a time as to impress him with the value of the waters of these now famous Springs.

Mr. Hugh Blair believed, as to the waters, that pure water was the secret of benefit—therefore suggested distilled water. Thought phosphorus would prove as ineffectual as all other drugs. He believed a young subject affected with diabetes mellitus would certainly die—an old one would probably be able to prolong life by diet and other means until killed by some other disease. He related the case of a hospital patient, who, not improving much, went to his work, and, though he was not cured, grew better from that time. Mr. Blair would recommend the employment of brain and muscle. He would suggest, in the way of food, wheaten bread cut very thin and toasted. Dextrin would not be so readily converted into sugar as starch. All the remedies that had been used appealed to the nervous system. Sugar in the urine was no proof of diseased kidneys, but those organs would be injured by the long-continued passing of such quantities of water through them. He had known of a woman (diabetic all her life) passing as much as a pound and a half of sugar per day. He referred to the case of a man in this city, who, for 12 years, had been afflicted with diabetes. Six months ago he had been dieted, with the result of disappearance of sugar. He was now dying from the effects of contracted kidney. Twelve years ago he had received a great mental shock, which was probably the cause of the diabetic trouble. Though he now passed large quantities of urine, the specific gravity was low. This was one of the symptoms of contracted kidney—due directly, however, to the hypertrophied heart.

Analyses. Selections, etc.

Surgical Treatment of Abscess of the Liver.

A casual glance over the most prominent text-books of surgery is sufficient to show that the treatment of hepatic abscess is but briefly dealt with Aspiration, tapping by trocar, and free incision are recommended, as the needs of the case may indicate. The treatment of laparotomy, either by one or by two stages, as endorsed by Lawson Tait, Pye Smith and Taylor, has also found favor. But at best, re-

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covery after any of these methods is slow, and fatal issues are not infrequent. It is noteworthy that the after-treatment of abscess of the liver is but sparingly dealt with in the majority of the books, and a great deal of the surgeon's knowledge is taken for granted.

Mr. Vaughan Harley, in an address before the British Medical Association, reported in the *Medical Press and Circular*, April 30th, 1890, described a rapid mode of cure of abscess of the liver, which both in his hands, and in the hands of others, has yielded most gratifying results. Before describing Mr. Harley's operative procedure, in order that the *rationale* of the process may be readily understood by those who have given no special attention to hepatic diseases, the following particulars are subjoined from Mr. Harley's paper.

1. Inflammations of the liver end much more frequently in purulent formations, in hot than in cold countries. 2. Men are far more liable than women to liver suppurations. 3. Although an abscess of the liver may occur at any period of life, it is much more common between the ages of twenty and fifty years than at any other. 4. Suppurations of the hepatic tissues are most frequently met with in strumous subjects; and the most unsatisfactory cases of all to treat are those in which a syphilitic taint is super-added to a constitutional struma. 5. The most noted predisposing causes to liver abscess are struma and alcohol, even when alcohol is indulged in within what is usually regarded as the limits of moderation. 6. The commonest of all the exciting causes is a sudden chill. 7. All abscesses of the liver tend to evacuate themselves by burrowing their way to the surface of the organ, and seeking an outlet for their contents either directly through the abdominal walls, or indirectly through the pulmonary or digestive systems. 8. It is futile to evacuate a liver abscess either by knife or by trocar so long as a free opening is not left to give escape to the subsequently formed pus. 9. When an accumulation of pus has taken place in the liver, it not only tends to do serious mischief by the use of disintegration of the hepatic tissues, but also, from its becoming putrid, to kill the patient by blood-poisoning. This likewise occasionally happens when hydatids of the liver suppurate. 10. Cancerous and tuberculous deposits in the liver, by disintegration, sometimes lead to the formation of purulent formations. 11. As soon as the existence of purulent matter in the liver is detected, it should be evacuated, and the more promptly it is done, the better will be the patient's chances for recovery.

The presence of pus being suspected, its exact situation

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should be searched for in the following manner: A fine exploring trocar, eight inches long, is to be passed into the liver obliquely from right to left, or *vice versa*, according to the site the abscess is thought to occupy. Then the instrument should be slowly withdrawn, so as to allow sufficient time for a drop of pus to appear at the orifice. If pus be found, its situation and depth in the organ should be carefully noted. If blood instead of pus flows, the bleeding ought to be encouraged. For, in cases of suspected hepatic abscess there is always more or less congestion, and marked benefit is likely to arise from a free hepatic phlebotomy.

The presence of pus having been substantiated, before withdrawing the exploring canula, as much as possible of the purulent matter should be allowed to flow from it. Immediately on its ceasing to flow through the narrow tube, the surgeon should introduce, in exactly the same direction and to precisely the same depth, one of the diameter of a No. 8, or No. 10, catheter English scale, and through it empty the abscess completely by means of an aspirator. When empty, the cavity should be washed out with tepid water containing ten grains of boric acid to the fluid ounce, and the washing should be continued until the liquid returns clear and odorless. Then as large a silk elastic catheter as will pass through the canula into the abscess cavity should be inserted, and on withdrawing the canula the extruding end of the catheter should be cut off to within one and a half inches of the opening in the abdominal wall, and securely fastened there. This done, the whole should be covered with a hot, soft, linseed poultice.

The abscess cavity should be washed out with boric acid solution night and morning, and poultices should be constantly applied until the purulent discharge almost entirely ceases. If, however, as occasionally happens, the cavity refills, another opening should be made at a short distance from the first, and a second drainage tube should be introduced. This counter opening, by facilitating the washing-out process, greatly hastens the cure.

The advantages of this mode of treatment are well illustrated by the report of two most unfavorable cases, in which it was employed with complete and speedy success. The first case was that of a patient who, before the operation, nearly died with blood poisoning, due to absorption into the circulation of the poisonous products of putrid pus. This patient was exceedingly weak, both in body and mind. The liver dullness extended from the nipple to the umbilicus. At the time of the operation his pulse was 108, and his temper-

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ature was 102° F. Sixteen fluid ounces of pus were evacuated, and the prescribed treatment was rigidly adhered to. The next day the pulse was 99 and the temperature 100°; and twelve days after the operation, the patient was able to return home. The second case was one of multiple abscess occurring in the greatly enlarged liver of a strumous patient. The liver dullness extended from the nipple to two inches below the umbilicus. The day of the operation the patient's temperature was 103° F., and his pulse 120°. Three days after the first abscess had been evacuated, a second one was discovered and treated in the same way. Recovery was rapid, and in three weeks all discharge from the wound had ceased.

The advantages of treating liver abscesses in the manner described may be briefly summed up in the following sentences First, by the employment of boric acid we have not only the assistance of a thoroughly safe antiseptic agent, but the great advantage which accrues from the use of one free from the objection of coagulating the albuminoids in the pus, and thereby inducing a fouling of the instruments, such as is unfortunately the case with carbolic acid and most other antiseptic preparations. Second, the daily washing out of the abscess cavity with boric acid solution, not only expedites the healing process by keeping it clean, but has the further advantage of rendering it quite unnecessary to take any precautions against the intrusion of air into the cavity, no matter how large it is. Third, the washing out of the cavity with boric solution, from its enabling us to get rid of all the purulent matter, thick as well as thin, does away entirely with the necessity of making a large opening either through the abdominal walls or into the liver tissues with a knife or other instrument—a point of no slight importance, seeing that it is a well-recognized surgical axiom, that the smaller the breach of continuity in any animal tissue, no matter whether it has been made accidentally or intentionally, the quicker proportionally is the healing process.

Mr. Hawley's method has also another point of value, namely, its simplicity. The procedure described is one which is easily understood and as easily carried out; and, should it prove as successful in others' hands as it has in those of Mr. Hawley and his colleagues, it will surely throw additional light and hope on the treatment of hepatic abscess. —*Med. and Surg. Rep.*, June 21, 1890.

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Pulsatilla for Orchitis, Ovaritis, Cystitis, etc.

Dr. Tucker, of Dallas, Tex., in the *Medical Standard*, gives abundant confirmation of the value, so often expressed in our pages, of pulsatilla in orchitis, whether idiopathic, traumatic, specific, or metastatic. The Doctor gives two drops of the tincture every two hours. We have found best results by giving one drop doses, every fifteen minutes, for one or two hours, then every half an hour for one or two hours longer, then every hour until a cure is effected. This is equally valuable in ovaritis. We have had considerable experience leading us to the belief that it is of especial value also in inflammatory affections of the kidneys, bladder, and urethra of both sexes.—*Memphis Med. Monthly*, June, 1890.

Bicarbonate of Soda for Poison Oak Eruption.

Dr. E. J. Dennis, of Kansas City, Mo., in a recent numnumber of *Medical Brief*, says that the serous fluid which escapes from the pustules, due to rhus (or poison oak) is intensely acid, as tested by litmus paper. Acting upon this hint, he applies bicarbonate of soda all over the surface affected, and it gives almost immediate relief. A second application completes the cure. It affords relief to the burning and itching, which are the prominent and distresssing symptoms. He also uses quinine from the start.

Book Notices.

Saunders' Question Compends. (I.) Essentials of Diseases of the Skin, including the Syphilodermata. By HENRY M. STELWAGON, M. D., Ph. D., Attending Physician to Philadelphia Dispensary for Skin Diseases, etc. With 74 Illustrations. 12mo. Pp. 270. Cloth, $1. By mail from Publisher. (II.) *Essentials of Examinations of Urine—Chemical and Microscopical.* By LAWRENCE WOLFF, M. D., Demonstrator of Chemistry, Jefferson Medical College, etc. Colored plates and numerous Illustrations. 12mo. Pp. 66. Cloth, 75 cts. By mail from Publisher. Philadelphia. W. B. Saunders. 1890.

These "Question Compends" are arranged mostly in the form of questions and answers, so as to include every important point in the most concise way. As each of them

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represents the *Essentials* of the branch of study named in the title, they are of guiding value to the teacher, instructive to the practitioner who wants simply a "yes" or "no" item of information, and are sufficiently full for the student preparing for examination.

Wood's Medical and Surgical Monographs. Vol. 6, No. 3, *June*, 1890. Published monthly at $10 a year. Single copy, $1. 8vo. Pp. 350. Wm. Wood & Co., Publishers. New York.

This number contains three monographs. (1.) Bronchial Asthma; its Causes, Pathology and Treatment, by John C. Thorowgood, M. D., F. R. C. P.,—75 pages. (2.) Convulsive Seizures, by J. Hughlings Jackson, M. D., F. R. C. P., —42 pages. (3.) Surgical Treatment of Diseases of the Brain, by Ernst von Bergmann, of Berlin,—204 pages. In addition, the copious index, table of contents, preface, and title page for the volume are bound with this number, which, as usual, is well selected as to material, etc.

Editorial.

Medical Provision for the Poor of Richmond Needed.

Richmond, with its immediate suburbs, has a population of over 100,000, which is rapidly increasing. Louisville and New Orleans are the only cities larger in the entire Southern States. And yet, beyond a ward or so for the sick in the poorhouse, and an appropriation of about $300 for the College Dispensary, this city stands shamefully in want of a hospital for the poor. During the meeting of the Richmond Academy of Medicine and Surgery June 24th, a committee of that body was appointed to petition the City Council on the subject of better medical provision for the poor of the city, and it is to be hoped that the city officials may at last be aroused to a proper recognition of the realities, and remove the disgrace that now rests upon this community. A Committee of the Academy of Medicine and Surgery is authorized to solicit of the Council the appointment of at least four city physicians to attend the needy poor of the city. Another Committee is to seek the establishment of a City Hospital worthy the name. It is to be hoped that the City Council will at least take these subjects under consider-

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ation, and will make haste to make ample provision for the medical care of the sick poor. We know of no city in the Union of anything like the size of Richmond that has not long ago built and equipped its City Hospital, and made other more or less liberal provision for their sick poor. Richmond cannot afford to delay such matters any longer.

Messrs. Hazard, Hazard & Co. Sail Under False Colors.

We have had occasion, for some time, to doubt the honesty of this firm, but were hoping that before this they would have relieved themselves of occasion for our suspicion. We have afforded them abundant opportunities to straighten themselves out in our estimation, but as they seem entirely lost to those principles which regulate dealings with honest houses, we are painfully forced to recall any commendation we may have given this house in the past. We append a card from Mr. W. F. Ford, which appeared in the *New York Medical Journal* June 21st, which explains itself. He says in that journal:

"My attention has been called to the advertisement of the corporation Hazard, Hazard & Co., in your issue of June 14, 1890, wherein they state that their 'Surgical-instrument department is under the direction and personal supervision of W. F. Ford, instrument maker to St. Luke's, Mount Sinai, New York State Woman's Hospitals, Bellevue, and all the other New York hospitals.' I deem it my duty, not only to myself, but to the surgical and medical profession at large, to state that this statement is without any foundation whatever, as I have no connection of any kind with Hazard, Hazard & Co., or any of their departments; and that the only instruments now made under my direction and personal supervision are those manufactured and sold by the W. F. Ford Surgical Instrument Company. As I have been manufacturing for the surgical profession continuously for over forty years, it is but right that they should be informed of these facts."

Mr. A. H. Robins, of Richmond, Va.,

Changes his advertisement this month to one of the "Special Card-Board Spaces," between pages 52 and 53, after reading matter. During the year, he will build and move his store to the northeast corner of Marshall and Second streets. But where he now is (523 N. Second street), he has steam atomizers, at $2 each; family syringes, with hard rubber fittings, at 50 cents each; and numerous other such

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articles, which will well make it to the interest of purchasers to call on him. Orders by mail are as promptly and faithfully attended to as if the party were present to select for himself.

Regional Anatomy in its Relation to Medicine and Surgery.

The J. B. Lippincott Co., of Philadelphia, Pa., announce as in press this important work, by Geo. McClellan, M. D., Lecturer on Descriptive and Regional Anatomy at Pennsylvania School of Anatomy, etc. The work will be complete in two large quarto volumes of about 250 pages each, and will contain about 100 full-page fac-simile illustrations from photographs taken by the author of his own dissections, and colored by him after nature. The work will be sold by subscription only, and salesmen will begin active canvass during October, 1890, as Volume I will be ready about December, and Volume II will appear shortly afterwards.

Report of Dr. Joseph Jones, President Medical Association of United Confederate Veterans.

We are sure that the report from Dr. Joseph Jones, in this number of the *Medical Monthly*, will be read with historic medical interest. No one of the Confederate Surgeons has done so much to collect and preserve unpublished medical reports, etc., of the Confederacy. But aside from the historic interest of the Association assembling in Chattanooga, the *benefit feature* of the organization should commend it to every one connected with the medical service of the Confederate States.

The Paris Medicine Company

Have removed to 212 N. Main St., St. Louis, Mo. While noting this removal to a more central market, we wish to call special attention to the value of the *Tasteless Quinine* manufactured by them. This *Tasteless Quinine* is as useful therapeutically as the Sulphate, and it surprises us that it is not universally adopted wherever the bitter taste of the Sulphate is a barrier to its use.

Dr. R. D. Garoin, of Richmond, Va.,

Is to be congratulated on receiving a prize of 250 francs, offered by *La Tribune Medicale* for the best of a series of essays on "*Heredity*," which appeared in a late issue of that excellent journal, published in Paris.

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Dr. George Bayles, of Orange, N. J.,

Goes to Berlin this month, to attend the Tenth International Medical Congress, as the delegate from both the New Jersey State Medical Society and the New York Academy of Medicine. He has also the honor of being delegated by Mr. Thomas A. Edison to present some important experiments, made in his Laboratory at Orange, N. J., showing successful treatment of reduction of uric acid concretions by electrical endosmose. In the agency of that illustrious physicist, Dr. Bayles has already received assurances of special welcome from the managing officers of the International Congress.

Triple Board of Medical Examiners in New York.

"Among the medical bills rescued from the wreck of the last Legislature, by the signature of the governor, is that known as "Bill No. 313," providing for three separate Boards of State Medical Examiners, after September 1st, 1891, to be appointed by the Regents of the University. One Board will represent the State Medical Society, one the Homœopathic State Medical Society, and the third the Eclectic State Society. After the act goes into effect, no person can practice medicine in the State until he has passed an examination, uniform for all parts of the State, for all subjects except therapeutics, in which subject each school shall have its own form of examination."—*New York Medical Journal, June* 21, 1890.

Millboro Sanitarium

Is a health and pleasure resort, of limited capacity, just opened at Millboro Depot, Bath county, Va., on the line of the Chesapeake and Ohio Railroad, under the direct supervision of Dr. G. M. Nickell. No practitioner in his section is more favorably known for all the qualities of a good physician and surgeon, and we most cordially wish his enterprise that support from professional recommendation to patients which his friends should give.

Country Practice for Sale.

Wo invite attention to the advertisement of the "Country Practice for Sale," in Advertising Department. We speak knowingly in saying that the offer is cheap, and affords an excellent opening for a practitioner in search of location.

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RICHMOND, AUGUST, 1890.

Original Communications.

ART. I.—Surgery in Practice; or, A Plea for Operative Interference when Indicated.*

By J. M. FORT, M. D., of Paris, Texas.

Some one has said that "we are living in what may very properly be called the day of specialisms, and that each specialty has its own peculiar sphere of usefulness—that it would be difficult, if not impossible, to say that the ardent, earnest workers in any one of them excel or surpass others in their usefulness to humanity, or in the greatness and grandeur of their achievements." This may be endorsed as a well-established fact, applicable to a limited and legitimate number of these so-called specialties; but when we remember that these specialties themselves have been divided and sub-divided into other specialties, and when we further consider that many of these minor specialties, as they may be called, have fallen into the hands of empyrics and mountebanks, totally ignorant of the great underlying fundamental principles of scientific medicine from which

* Read before the North Texas Medical Association, at Bonham, Texas, June 11th, 1890.

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they sprang—when considered from this standpoint—a standpoint the truth and evidence of which can be seen almost daily in our cities and towns by noticing the advent of one of them, whose approach is usually heralded by a great flourish of trumpets, such as extensive newspaper advertisements, circus-like posters, emblazoned with the pictures of the hero, bombastic eclat, forged certificates of cures, and other glaring falsehoods, which would put even a Judas Iscariot to the blush—the above assertion must be taken with a considerable degree of allowance. Be this as it may, however, it involves a question I do not propose to discuss at this time only so far as it relates to the separation of surgery from the general practice.

The general practitioner of the science and art of medicine should never lose sight of the fact that these specialties, so-called, are but branches growing from, or out of, the great tree of medical knowledge.

Unfortunately for humanity, and for the science of medicine, as well as for the general practitioner, the art of surgery is unquestionably being gradually separated from the general practice, and is being regarded by many as another branch, or specialty, of this far-reaching tree, and this is being done by the general practitioners themselves. The physician, whether he be a general practitioner or a specialist, should be deeply impressed by the fact that the ideal physician is, not the specialist, but the man who, by long years of intense and intelligent study, and close observation in all the branches, has fitted, qualified, and endowed himself with the power and ability to cope with and successfully treat the greatest number of the diversified ills and accidents which befall the human family.

Who is prepared to say where the duties and responsibilities of the general practitioner end and the specialist begin? Who is authorized to draw a line of separation, and say, as a general practitioner, as an intelligent physician, "Thus far professional duty calls me, but no further."

Has this line of separation, pointing out the duties, obligations and responsibilities of the one, and the other, in the

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different departments of scientific medicine, ever been defined and marked out? If so, by whom, by what authority, and where are we to find it?

As practicing physicians, professedly qualified to discharge our whole duty in all the departments of our noble calling, this subject is most assuredly worthy of our most serious and thoughtful consideration.

This is especially true when we consider the generality of surgical knowledge concerning operative measures, and when we regard the facilities derived from anæsthesia and antiseptics, taken in connection with the frequent surgical emergencies which necessarily arise in the practice of every physician, whether he be located in city, town, or country.

Again, when we further consider the fact, patent to all, that the surgery of to-day "is far more conservative, that it corrects more deformities, ameliorates more suffering, and happily and safely brings about more recoveries, and prolongs and saves more of human life, than at any other period of our history;" and when, with the rapid progress of scientific medicine, we see almost daily the skilled hand of surgery reaching out and transferring diseases, diseased organs, and pathological conditions, from the field of therapeutic medication to the domain of operative surgery, the question as to where professional duty ends comes home to every practitioner of medicine, every conscientious physician ladened with professional responsibility, professional duty, pride, and human life. Can he, dare he, arrogate to himself the right to draw this line of separation, and say, "Thus far, but no farther."

In very many instances of what may be called "surgical emergencies," as well as in many cases where surgical interference offers the best, if not the only, hope of saving life, "delay means death." The profession not only imposes upon the physician the duty of being at all times thoroughly qualified and fully competent to meet these emergencies, but he must realize, to its fullest extent, and in all of its bearings, the necessity of immediate, prompt action. Often there is no time to parley, no time to delay or postpone, no

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time to shift the responsibility of his case on to the shoulders of a specialist or a brother practitioner who has endeavored to discharge his whole duty as a physician, and consequently has become more familiar with operative procedures than he. He must be prepared to act, and act at once.

Since the successful practice of surgery is now universally recognized by the medical world to be dependent upon a practical knowledge of the fundamental principles of asepsis and antisepsis, and as the general practitioner, even in the rural districts of the country, when possessed of such knowledge, can avail himself of its benefits in almost all cases coming under his care, I shall not consume your time nor tax your patience by detailing antiseptic operations, antiseptic dressings, etc., or what it takes to constitute them. I shall only endeavor to present cases which, in my judgment, forcibly demonstrate the truth of the position taken in this paper, to wit: That the practicing physician, in the rôle of professional duty, has no more right to withhold the surgical means of relief from suffering or the surgical means of saving life, when indicated, than he has to refuse to administer therapeutic agents for a like purpose when in like manner indicated. I am aware that this may appear or present itself as a rigid proposition, and one that may strike some of my readers with a good deal of force. I wish it may.

The physician should remember that surgery, and the technique of surgical operations, constitute one of the fundamental and essential elements of his medical education; and when surgical treatment, either primary or secondary, becomes necessary and clearly indicated as the proper line of treatment in any given case, whether for the amelioration of suffering, for the prolongation of life, or with the hope of thereby saving life, there is no ethical right, no recognized professional law, that exempts or exonerates him from the prompt discharge of duty in this particular, any more than from the administration of therapeutic agents when in like manner indicated. The physician who announces himself as such, and offers his professional services to the public,

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and then fails, or refuses, to render such service, when the welfare of his patient demands it at his hands, no matter under what department or branch of medical science it may come, virtually places himself in the position of a specialist, and in justice to his profession, and to the community to whom he offers his services, should so announce himself.

It may be asked if I regard it as the duty of every man, who is engaged in the practice of medicine, to be also an operative surgeon? God forbid! For it is well known that there are men to be found here and there, all over this free, go-as-you-please and do-as-you-please country of ours, who would not know an artery from a vein, or a kidney from a testicle. But, if I were asked if I expected every enlightened physician to be prepared and competent to operate in all cases of surgical emergencies, my answer would be that the day is at hand, and the hour is come, when your profession not only expects, but imperatively demands this at your hands. The great flood of light which has recently been shed upon the etiology and pathology of many diseases, which, until now, were regarded as indicating treatment alone by the administration of medicinal agents, but which have now, as above stated, been wholly, or in part, transferred to the domain of surgery, makes the matter of operative procedures no longer a matter of choice or election, but stares the physician in the face, and demands it as a matter of stern duty, which he has neither a professional nor a moral right to avoid or refuse to perform.

Who, I ask, has the right to limit professional duty until he has reached the frontier, the border-land of professional science? Who, claiming to be a physician of to-day, dare hang back and loiter in the shades and shadows of by-gone days, and refuse to enter the great stream of light and knowledge which comes pouring in upon the profession of medicine from every nation and almost every clime under heaven —and then say, "I have exhausted the resources of my art?"

Permit me to call your attention, briefly, to some of these cases. I shall select typical cases, and such as you may be

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called upon to treat at any time. I shall confine myself, in the main, to the treatment; for, after all, the responsibility connected with the practice of medicine, which so often prematurely furrows the cheek, stoops the shoulders, dims the eyes, and silvers the locks of the physician, is expressed by the two words, *diagnosis* and *treatment.*

Of the many conditions formerly treated by physicians exclusively by the administration of therapeutic agents, but which, with the advance of the science, have been brought within the province of the surgeon, the most important are, perhaps, intestinal obstruction in its various forms, and other diseases involving the various abdominal organs or viscera. Comparatively speaking, this is a new field for surgical procedures.

It is surprising to see with what tenacity some, yea, may I not say many, medical men cling to the old idea that there is a peculiar danger attached to any and every operation which requires, for its performance, an incision of the peritoneal membrane. They seem to regard this membrane as something sacred, and to invade its precincts as little less than premeditated murder. They seem to lose sight of the fact, if, indeed, they were ever in possession of it, that traumatic peritonitis from this cause is the least of all the dangers or complications to be apprehended from abdominal surgery.

What a pity the minds of this class of physicians cannot be as forcibly impressed by the fact that the danger attending laparotomy for any cause does not arise from the peritoneal incision; nor, indeed, from the removal of abnormal growths, diseased tissue, or septic matter, from the peritoneal cavity—which may have necessitated the operation—but, in a vast majority of instances, it arises from the introduction of septic matter into the cavity by the operator, his instruments, or his assistants, and from closing the cavity before it has been rendered thoroughly aseptic.

In fact, the opinion is now entertained by very many physicians, and is rapidly gaining ground, that all peritoneal inflammations, whether local or general, are septic in char-

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acter, and that, in the majority of instances, peritonitis assumes virtually the character of a symptom, the disease being some well-defined, recognized lesion of the abdominal or pelvic viscera.

If clinical observations, post-mortem evidence, and data obtained by opening the abdominal cavity during the progress of attacks of peritonitis itself, furnished any evidence whatever of the correctness, or even a plausible probability of the correctness of this old idea, you would scarcely find advanced medical opinion enunciating the doctrine "that free opening of the abdominal cavity, washing out, and drainage, must become the practice in all cases of general peritonitis—and in local peritonitis, where there are marked symptoms of the formation of pus; or where the symptoms indicate an extension into general peritonitis."

Prof. Wylie is even more emphatic, and says: "I wish especially to advocate the early opening of the abdominal cavity in cases of general peritonitis."

I wonder how many of our practicing physicians would have the courage, actuated by a full realization of professional duty, to insist upon laparotomy in a case of typhoid fever, for instance, in which symptoms of peritonitis, from perforating ulcer, suddenly develop? Prof. Senn says: "As perforating ulcer, in typhoid fever, must almost of necessity lead to a speedy, fatal termination, abdominal section, suturing the peritoneum, and disinfection of the abdominal cavity, present themselves as urgent, and the only rational indications in such cases."

If advanced medical science demands of the physician this operative procedure as a means of saving life in patients already exhausted and debilitated by long-continued fever, how much more imperative the demand for laparotomy in gun-shot and stab-wounds of the abdomen? I am inclined to the opinion that the physician would do well in gun-shot and stab-wounds of the abdomen to follow the line of treatment laid down by Dr. David Barrow in a paper, read before the last State Medical Association of Kentucky, upon "Gun-shot and Stab-wounds of the Abdomen," in which he

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says that "shock is an unreliable symptom in such cases, but whether symptoms of shock be present or not, the first thing to be ascertained is, whether the peritoneal cavity has been entered or not; and to do this, it may be necessary to enlarge the wound and follow the track of the ball or knife" (or make an independent incision if deemed advisable); for in reaching the cavity you may find a perforation of one or more of the folds of the intestines, with extravasation of their contents, or you may find a hæmorrhage from the wounded vessels of the omentum or mesentery, as was the case in a stab-wound of the abdomen of a blind man, which occurred in our city in May last. In this case, the abdominal wound was enlarged, the bleeding vessels ligated, the clotted blood removed, the abdomen thoroughly washed out with hot water, the abdominal wound closed with drainage, and subsequently irrigated, the case making a good recovery. In this instance the physicians were general practitioners of medicine.

In the *Boston Medical and Surgical Journal* of November 15th, 22nd, and 29th, 1888, you will find a very able, condensed, and practical series of articles, upon the subject of Intestinal Obstruction, by Dr. R. H. Fitz, in which, after analyzing the symptoms of strangulation, intussusception, twist of the bowels, gall-stones, strictures, tumors, etc., he says: "The symptoms, apart from the stoppage of the bowels, upon the presence of which the physician must rely to establish a diagnosis of acute intestinal obstruction, are—abdominal pain, nausea or vomiting, tympany, and abdominal tumor." He regards "hiccough, jaundice, abnormal urine, and fever, as occasional and subordinate symptoms." In this paper the writer limits himself chiefly to the consideration of the medical treatment of these cases, which renders his opinions and conclusions, in my judgment, of far more value, and more worthy of our attention, when considered in this connection. He says: "Nearly all cases of acute mechanical intestinal obstruction die, unless relieved by surgical interference; that curative medical treatment has proven of sure avail in only a limited number of cases."

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Mr. Frederick Treeves, who has written much upon this subject, says: "In cases of invagination, the earlier the operation the more easily the invagination is reduced; and when the reduction is easy, the mortality is lessened." He further adds: "An additional advantage of an early operation is that, in a majority of cases, a limited amount of interference with the abdominal contents will be sufficient to relieve the condition."

The advantages arising from early operative procedures is equally applicable, not only to all cases of acute intestinal obstruction, but the success of surgical procedures, as well as the welfare of the patient, is largely enhanced in abdominal surgery, in a majority of instances, by early operation, short or limited incision, an expeditious operation, and by a limited handling of the abdominal viscera. It may be said, by some timid physician, that these cases of intestinal obstruction are more frequently met with in children too young to undergo an operation of this magnitude. In answer to this, I would say, by consulting the *International Journal of Surgery* you will find reported a successful case of laparotomy in the person of a child six months old. Case, one of intussusception; operation performed 60 hours after the attack. Thos. Annandale (taken from *Edinburgh Medical Journal*) reports a successful laparotomy in a child three years old; and a Russian physician, of Kassan, reports a successful laparotomy for tumor in a child, or rather infant, just 60 hours old.

So it will be seen that the age of the child should not act as a barrier or objection to the performance of this operation, when indicated.

Let me invite your attention to the consideration of another abdominal affection, which has been in part or wholly transferred to the domain of surgery—that is perityphlitis, or a name I like better, appendicitis. At the last French Surgical Congress, M. Raux, of Lausanne, stated, as his opinion, that there is a tendency to abstain from all active treatment in suppurative appendicitis, from an incorrect belief that spontaneous cure is the rule. On the contrary, he says,

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"There are a great number of accidents, and relapses, and frequent cases of fatal peritonitis, which can be avoided by early surgical interference." Dr. Robert F. Weir, Professor of Clinical Surgery, College of Physic. and Surgeons, New York, says of this disease: "All such abscesses originate in the peritoneal cavity, and there develop to an appreciable size, before invading the extra-peritoneal tissues or viscera"—the appendix and cœcum being enveloped by the peritoneal membrane. "If a tumor be found, it should be opened by a lateral incision." When should this be done? "As soon as symptoms, constitutional or local, indicate the formation of pus." What more? "If symptoms, indicating an increase of the local peritonitis, such as persistence of vomiting, spreading pain, abdominal resistance, and temperature elevation, continue, with or without the formation of tumor, for a period of forty-eight hours (as a rule, that would be about the time the physician would be called to see the case,) the danger of the disease is greater than the proposed lateral or median laparotomy, which should then be immediately resorted to." "In many cases," he adds, "even less time should be afforded the consideration of the disease before operating."

Prof. Volkman expresses the opinion that "suppurative appendicitis should have no other than surgical treatment." At a recent meeting of the Medical Society of London, Prof. M. F. Bull, of New York, read a paper "On the Diagnosis and Treatment" of this disease, in which he says: "While the profession preach early operative interference in these cases, their practice was not always early enough to save the patient."

Now, let me ask the general practitioner of medicine if, in such cases as the foregoing, you or your patient can afford to wait, and postpone operative interference for twenty-four, or perhaps forty-eight hours, for you to send off to some town or city for some medical brother to do for you the work you can and ought to do for yourself. I am aware that very many physicians view, with undue timidity, any kind of operative procedures, especially abdominal operations, and

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are, in consequence, inclined to delay the adoption of measures, on the prompt execution of which the life of the patient may, and often does, depend.

Before leaving this important subject, let me call your attention to what Mr. Frederick Treeves says in an article (found in the *British Medical Journal* of November, 1889,) upon the subject of "Removal of the Appendix." Mr. Treeves says: "The treatment of cases of relapsing typhlitis by removing the appendix vermiformis during the period of quiescence, offers probably more admirable results than are obtained in the treatment of any other form of disease." Other operators express the same views.

I would next call attention to the very many reports found in our journals recently, setting forth the favorable results of supra-pubic operation for the removal of stone, or foreign bodies, from the bladder, for retention of urine in prostatic enlargement, and for drainage in cystitis—some of these cases, especially cases of retention of urine from prostatic enlargement, and it is to these distressing cases I will invite your attention. Some of them are urgent, very urgent, and call for immediate operative action.

Mr. Buckston Browne reports, in *British Medical Journal* for May, 1889, a case which was not only one of great emergency, but one calculated to call forth the deepest sympathies of the humane physician. The patient, 87 years old, was suffering from intense vesical irritation; the catheter was imperatively called for every hour, and his screams from vesical spasm were heart-rending, in spite of the free administration of morphine. The bladder was opened supra-pubically, no stone was found, but growing from below, and from the right side of vesical urethral orifice, was found an enormous prostatic growth. It was removed piece-meal, by finger and forceps, the only difficulty being at first in getting through the prostatic capsule. When once that was opened, the growth was easily removed by tearing it up with the finger and tortion. No cutting was employed. When removed, it weighed nearly four ounces. There was no hæmorrhage. The operation was followed by very little con-

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stitutional disturbance. There was complete vesical relief and a speedy recovery.

Here was an urgent case, a very old man, suffering intensely, who, by an operation, easy of execution, comparatively safe, and bloodless, was not only relieved from intense pain, but was saved from great future suffering and an early death.

Dr. F. S. Watson reports a somewhat similar case; patient very weak and anemic from loss of blood; aged 69 years, suffered from active hæmorrhage from bladder; supra-pubic operation revealed enlargement of each lateral portion of the prostate to the size of a Spanish chesnut, connected by a less prominent median ridge, which, at some time previous, had been perforated by an instrument. Surrounding this hole was a surface about the size of the end of one's thumb, covered with flabby and exuberant granulations. This area proved to be the source of the intra-vesical hæmorrhage. This patient was permanently cured by the operation.

Mr. A. F. McGill, of Leeds, in a discussion of this subject, says: "In comparing the peritoneal with the supra-pubic operation, I prefer the latter, for the following reasons—namely: 1st. It is more generally applicable; 2nd. It can be performed with greater precision, and completed with greater certainty; 3rd. Experience has demonstrated that it insures complete and efficient drainage; 4th. It is equally safe; 5th. The operation is much more easily performed;" all of which may be regarded as weighty considerations in favor of the supra-pubic operation in bladder troubles requiring operative interference.

Now, should the physician, when called to see one of those old veterans, these links between generations, who has borne the heat and burden of the day of life, be content to prescribe a few doses of morphia or the hydrate of chloral, order him to take a few hip baths, and persist in the fruitless efforts to pass the catheter, and then say to himself, "Well, this old man has about lived out his years any way, and if his bladder should burst and kill him, he would not be cheated out of many days." I trow not. I can't think

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that the true physician would ever leave a case thus, or entertain, much less give expression, to such a thought. On the contrary, the sufferings and afflictions of the aged and infirm should ever excite our deepest sympathies, and receive at the hands of the physician his most assiduous and patient medical attention.

The foregoing comprises but a few, a very few, of the many cases which may, and which do, occur in the practice of the physician, with the technique of which he should familiarize himself, so that when duty to the requirements of his profession, and the saving of the life of his patient, demand their performance, he may with confidence present them to the patient, his family, or friends, not as a forlorn hope, not as a *dernier* resort to save life, but as a line of treatment clearly indicated—as curative means—which science has placed in his hands with an assurance of success, which he cannot hope to obtain by relying alone upon the internal administration of his favorite remedies, no matter what confidence he may have been led to repose in their potency and efficiency.

I might call your attention to the urgency of operative interference in cases of strangulated hernia, tracheotomy in membranous croup, etc., but having already consumed so much of the time allotted to the Section on Surgery, I can only mention these in connection with very many accidents, such as fractures, dislocations, contusions, lacerated, incised and penetrating wounds, etc., etc., some of which, in these days of railroads, and more general use of machinery of every kind, are of almost daily occurrence; and which the physician who values his reputation, and is proud of his profession, should be prepared to treat skillfully and scientifically; thereby demonstrating to the public the rapid strides which, in recent years, have been made in the science and art of surgery.

Before closing this article, I feel it my duty to invite your attention to another branch of this tree of scientific medicine, in the practice of which surgical emergencies of momentous import arise. I mean the obstetric branch. The

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emergency may be a ruptured womb; it may be a large head with a rhachitic or osteo-mallacic pelvis, or some other emergency calculated to strike terror and dismay in the heart of the most learned physician, or the most accomplished accoucheur—emergencies in which obstetric art pleadingly calls to surgical art; emergencies in which the learned hand of the accoucheur must be changed to the bold, skilled hand of the surgeon; emergencies in which failing, sinking, exhausted nature calls to the art of surgery for a helping, a rescuing hand; a demand for aid, for help, for life itself, life, perhaps, for two. It comes piteously from the most helpless of the helpless; it comes from dependent woman in the hour of her extreme danger and utter helplessness. It comes in the hour of her woe; in the hour of her extremity; in that dark hour, when hope takes its sudden flight, and despair, draped in the habiliments of death, hovers over her sinking, yet confiding heart. A plea that speaks from imploring eyes, from pallid cheeks, from cold, pulseless, outstretched hands; a plea ladened with the love and fond hopes of a devoted wife and mother.

> "Palsied must be the hand,
> Benumbed the brain,
> Worse than asleep the conscience,"

And dead to all the sacred instincts and fond memories of the human heart, must be the man—the educated physician—who, in such emergencies, can fold his arms, belie his profession, and say, "Thus far duty calls me, but no farther!"

Succus Alterans.

Dr. L. R. Poole, of Maysville, W. Va., wrote to Messrs. Eli Lilly & Co., that he is fully satisfied Succus Alterans has no equal as an alterative. He commenced using it on a lady patient, June 11th, covered with sores from her head to her feet. Three bottles entirely cured her, she thinks, but we prevailed on her to continue the medicine at least six months longer.

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Clinical Reports.

Nine Abdominal Sections Done in the Last Month—All Successful.

By JOSEPH TABER JOHNSON, M. D., Washington, D. C.

Case No. 1.—Miss N., white, age 19, suffered from menstrual insanity for the past three years; has always had pain at her periods, but lately has been much out of her mind just before, during, and for a day or two after her courses.

She was brought to me by Dr. J. P. Miller, of Buckhannon, W. Va., who had been her physician for many years. He had dilated her uterus with tents, and finally with Goodell's large dilator without relief. He had exhausted the list of drugs usually prescribed for dysmenorrhœa and hysteria, and the patient continued to grow worse. She was several times found wandering about the grounds in the cold and rain at night, clad simply in a night-dress. She had been a servant in a family, but no one would employ her now.

Dr. Miller brought her to me for a Tait's operation, which I performed on the 21st of April at Providence Hospital. One ovary was as large as a hen's egg, and the other was badly diseased; there was this additional reason for operating. She made a good recovery, and has passed two periods with only slight headache, and some of the peculiar flushes of heat and cold, such as women have at the change of life; no mental disturbance of any kind.

One peculiar point in this case, which has not occurred before in my experience, is, that the operation was performed during her menstrual period. Her clouded mental state became better at once.

Case No. 2.—Miss T., white, aged 29, had a large ovarian tumor which had been growing for two years. It was hard and solid apparently, giving only an indistinct sense of fluctuation. It had been diagnosed as enlargement by some, and cancer by others, of most everything in the abdomen. She had a sallow, bilious, malarial, and cancerous expression of countenance; was quite emaciated and weak.

She was brought to me by the same physician, from the same place, and at the same time as Case No. 1. They were both operated on the same morning, both occupied the

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same room in Providence Hospital, had the same nurse, both recovered in the same time, and both left for home four weeks after their operations, and a day or two ago reported themselves as perfectly well.

Case No. 3.—Miss E., from Virginia, white, age 32, sent to me by Dr. N. S. Lincoln, who had been treating her with electricity for six months for a fibroid tumor of the uterus. She had also been, for about a year, under the most excellent care of Dr. Wm. T. Howard, of Baltimore. Dr. Lincoln stated that, about a month before I saw her, although the fibroid had greatly diminished in size under the prolonged use of the battery, yet her abdomen had become much larger.

We found a large collection of fluid, and suggested an exploratory incision instead of the ordinary tapping. This was agreed to, and she took a private room in Providence Hospital, and I opened the abdomen on the 7th of May in the presence of Dr. Lincoln and half a dozen other physicians. After the escape of about two or three gallons of urine-colored fluid, I introduced my finger, and found a general cancerous development in all directions. Dr. Lincoln disinfected and introduced his finger also, and confirmed the diagnosis.

It being useless to proceed, the exploratory incision was closed in the usual way. The patient has entirely recovered from the operation and returned to her home in the mountains of Virginia, where she will probably die of the progress of her disease in the course of a year.

I received a letter from her to-day, in which she said that she was feeling pretty well, notwithstanding the fact that she was nearly as large as before the operation.

Case No. 4.—Miss C., white, age 21. Has been a sufferer from pain in her right side for nearly four years, and almost constant headache. Her trouble began with getting her feet wet at a monthly period, which caused an acute inflammatory attack in her right ovary. Adhesions were then formed which bound the ovary, tube and uterus in the right side of the pelvis.

Exertion of any kind greatly aggravated her pain. She could walk but a few squares, and was constantly suffering from the effects of over-exertion. When she lived the life of an invalid she had a certain immunity from pain in her right side, but her headaches were so severe and constant that she, as well as her parents, began to fear for the soundness of her mind. She developed a most irritable and un-

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certain temper, so that the entire household was often made uncomfortable and unhappy.

The patient was highly educated, had traveled over the greater part of the world, and had a brilliant future before her if she could regain the health to enjoy it.

After treating her for six months by electricity, iodine, hot douches, attempts at replacement of the uterus by the fingers, cotton and pessaries, combined with such medicines as are usually resorted to in such cases, and seeing no benefit from anything which had been done, I sent her away from home for three months, where she would be free from the little domestic irritations and parental advice, which caused her so many fits of temper and headache. She came home about the 1st of May no better, except in her temper, which had not been aroused while visiting her friends.

The only further suggestion which I had to make was to open the abdomen, break up the adhesions which bound the uterus, right tube and ovary in this painful position, removing the tube and ovary if found necessary. This suggestion was eagerly adopted by the patient and her family. She came to my Sanatorium, and I was fully authorized to remove anything which was, in my opinion, causing the mental and physical trouble.

On the 12th of May, I opened the abdomen in the presence of a number of physicians, and broke up the adhesions on the right side. In doing so, I was careful that any laceration of tissue should be on the side toward the uterine attachment of the broad ligaments and appendages. I hoped to be able to restore a normal condition without sacrificing any organs. The parts had been subjected to various attacks of inflammation, and were very vascular, and it became necessary to ligate back to the side of the uterus to control hæmorrhage. As the ovary and tube could then be of no further use, I snipped them off.

It is now seven weeks since the operation, and up to this moment it has been a perfect success; none of her old symptoms have annoyed her, no headache, no pain even at her period, which came on normally, and went away without having caused a ripple in her mental or physical symptoms. Her family, her friends and the patient herself are all delighted with her condition, and I see no reason why it will not be a permanent cure.

Case No. 5 was a negro woman, about 40 years old, in the colored ward at Providence Hospital. She had an intestinal fibroid about the size of my fist which projected into

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the abdominal cavity so much that I thought it was wholly in the uterus, and after using ergot and electricity with no permanent results, I gave her ether, and at the earnest solicitation of herself and friends tried to remove it, but could not succeed without opening into the cavity of the abdomen, which in one place I feared I had done. No harm resulted from the operation, and no good came from it either.

After four months, the hæmorrhage returning, at the request of the patient and her family, I again etherized her, and removed the ovary and tube on one side with great difficulty. The other ovary I could not find; after working diligently for half an hour I gave it up, and ligated the ligament and tissues next to the uterus, so as to cut off any communication between the two, and to control some little bleeding which my long manipulations had produced.

The patient was put to bed in the free colored ward with many dangers and annoyances, for such an operation, surrounding her; but in spite of them all she did very well, and has gone to her home in the country. She had a slight uterine discharge of blood after the operation, but not more than usually occurs. She has had no hæmorrhage, and bids fair to get perfectly well.

Case No. 6.—Miss H., white, age about 30, in bed for eight months with chronic peritonitis. Had made a number of attempts to get up, but any exercise always produced fresh attacks of peritonitis. She was sent to me by Dr. Chew, of this city. I found chronic peritonitis, with a matting together of pelvic and abdominal contents, and very tender in all directions. I proposed opening and irrigation of the abdomen, and as everything else had been done by Dr. Chew, including the constant use of morphia, without relief, the patient and her family agreed with Dr. Chew and myself, that this plan offered the best hope of a cure.

She accordingly took a room at Providence Hospital, and on the 13th of May I opened her abdomen, broke up many adhesions, dug the ovary and tubes out of their artificial beds, poured in several pitchers full of water, and floated the intestines and appendages all free from adhesions. I left about a gallon of clear water in the cavity, and closed the wound without a drainage tube, and without removing the ovaries.

Patient is now up and walking about, and will go home this week, and, so far, is free from her peritonitis, and also from the morphia habit, which was as bad a disease as the other. She gave much more trouble, on account of our

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efforts to stop the morphia, than on account of the operation. She took at one time as many as five hypodermics a day—Dr. Chew giving her the last one usually about midnight.

Case No. 7.—Mrs. F. came to my Sanatorium from Bristol, Tenn.; married for two years without having conceived; had been a sufferer for three years before her marriage, making five in all, with constant pain in her right ovary, greatly increased at her periods. Had had a great variety of treatment at home and in other cities. Had spent a great deal of money, and was constantly growing worse.

I at once proposed the removal of the enlarged, adherent and painful ovary. She and her husband, who came with her, at once consented, and I at once did it, and she has done perfectly well since. Is sitting up now and walks about her room, and will get well. Has had her period without pain.

Case No. 8.—Mrs. K., white, aged 40, was brought to my Sanatorium by Dr. Luck from Middleburg, Va., with an ovarian tumor about the size of an eight months' pregnancy. I operated upon her in the presence of Drs. Luck, Karr, Bovee, Luce and Cuthbert, on the 20th of May. The contents of the tumor had undergone such a degeneration that it closely resembled pus in some of its compartments. Its wall was very thin in two places, and was ruptured in the process of removal. It was an intra-ligamentous multilocular cyst. The abdominal cavity was irrigated and closed without drainage. She has recovered without a rise of pulse or temperature, without pain and without opium. She has recovered and returned to her home in Virginia.

Case No. 9.—Mrs. M., white, aged 40, was sent to my Sanatorium by Dr. Custis for a bleeding myoma about the size of a cocoanut. Having had no success in these cases with electricity, and the lady wishing something very radical to be done at once, I proposed the removal of her appendages. She agreed, and on the 24th of May, in the presence of Drs. Custis, Rixey, Adams and Cuthbert, I operated. The specimen shows only one ovary and tube fully removed. On the other side, the adhesions were so great and dense that I could not get it all out, but did as in the same operation in the colored woman mentioned before, ligated between the ovary and uterus, and thus cut off all communication with the uterus. I met with the only accident of the kind, which ever happened to me, in this case. After enucleating with care the ovary and tube, and making a surgical neck, and thoroughly and securely transfixing and ligating the pedi-

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cle, in cutting off the ovary and tube I cut off the knot off the ligature. The blood instantly welled up into the two-inch opening and obscured everything. I at once opened up the abdominal cavity about five inches, seized the uterus in my hand, and drew it up out of the wound and deliberately applied a lock forceps to each spurting vessel. I then transfixed through the horn of the uterus with a strong double ligature below the four forceps, and tied securely. When the forceps were removed no bleeding occurred. The patient has done well up to date, and presents every evidence of a complete recovery. She went home last week.

Notes of a Case of Idiopathic Acute General Peritonitis, in a Strong, Healthy Boy, Aged 16 Years—with Remarks. The Total Disappearance of Hepatic Dullness, in Peritonitis, as a Sign of Perforation of the Bowel——Also Notes of a Bloodless Case of Labor.

By W. R. WINCHESTER, M. D., of Macon, Ga.

Case I.—**Idiopathic Acute Peritonitis.**

April 17.—C. C., after running and getting very hot, drank ten or twelve glasses of ice-cold soda water. In a few hours he began to feel badly, and spent the evening at home, and showed signs of physical discomfort. Being one of the active and non-complaining kind, this unusual behaviour attracted notice from his family, and, when asked, acknowledged having considerable pain and soreness in his bowels. During the night he vomited frequently.

18th.—Pain and soreness increased, slept very little the past night. This A. M., his father gave him a dose of castor oil; in the afternoon he had several free actions from his bowels, but with no abatement of pain; soreness, nausea and vomiting. About 9 P. M., I was telephoned in for advice, when the above facts were related. I ordered x grs. of Dover's powder to be given at once, and a mustard plaster applied over the stomach and bowels.

19th.—A. M., I was called to see him. Had slept some the early portion of the night. Has constant pain in his bowels with paroxysms of violet pain. Lying on his back with knees drawn up, the abdominal muscles were rigid, and the whole abdomen was tender to pressure, particularly sensitive in the right illiac region. His countenance was anxious, upper lips were tightly drawn across the teeth, and

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there were fevers and thirst, but no appetite; he complained of pain and difficulty in micturition, slight delirium, pulse 125 per minute, and respiration was by the throat solely. He has some cough that began some weeks prior to this attack. The act of coughing, which he tries to suppress, gives extreme pain. Nausea and vomiting were prominent signs or symptoms.

(I outline the symptoms minutely to show there was no mistake in my diagnosis of peritonitis).

I adopted the usual treatment, namely: "Splint the bowels with opium," and ordered rest in bed, hot fermentations, ice and cold milk. His belly was so tender that I ordered one double of flannel wrung out of hot water covered with oil-silk to be applied. The nurse applied four thickness under two of the oil-sick, but he complained so of the weight, that it had to be changed to the original direction. Opium every three hours controlled the pain, at which interval it was given.

20th.—Pulse 120. Abdomen tympanitic and free from pain when perfectly still, except towards the close of the third hour after taking his opium pill. Makes water with great difficulty. Abdomen very sore and tender. No further nausea; other symptoms unchanged. Takes half-tea-cup of cold milk every three hours. Eats ice *ad libitum*. Treatment continued.

21st.—Pulse 100. General appearance better. Passed the night with comparative comfort, fully under the influence of opium, which he took every fourth hour during the night. Still very sore and tender, which prevents any movement of his body, but he expresses himself as feeling better. Abdomen greatly distended and tense.

I will state here that (from the beginning of the attack, the cause being involved in doubt), I thought possibly an orange-seed in the vermiform appendix had given rise to the trouble by ulceration and perforation, and was, therefore, on the lookout for evidence of it. The case, so far, was progressing as satisfactorily as possible, but having once read a paper in the *Virginia Medical Monthly* by Dr. Flint, Sr., on peritonitis, in which he stated that the disappearance of hepatic dullness indicated perforation, I was unable to reconcile the grave sign I now encountered and the favorable general condition of my patient. There was no

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dull space over the liver, but on the contrary the tympanitis was marked to the line of lung resonance. It was so very marked that while percussing over the liver very freely (when it gave the minimum degree of pain), the patient noticed it and said, "Dr., I'm hollow as a barrel."

I would expect collapse to follow perforation, and in addition, according to Guttman, when the gas burrows upward between the anterior surface of the liver and the abdominal parieties, we get a "clapping or flapping sound." These being absent, I withheld from the family this new cause for anxiety till further developments might sustain it.

I ordered a continuance of the same treatment as had been used, adding turpentine stupes.

22nd.—Patient better. He has passed much wind from anus since yesterday. Pulse 88. Legs extended. Hepatic dullness normal. Urinates with little pain after some waiting. Tenderness less, and all other symptoms improved.

I will follow the case no further than to say that his bowels remained locked up until the evening of the 24th, when they opened spontaneously, and afterwards continued to do so daily. The opium was continued in gradually reduced doses and at longer intervals. He steadily improved from day to day till convalescence was thoroughly established. I discontinued my visits on the 30th.

The object of this report is to call attention to the little importance of this particular sign as indicating perforation of the bowel when not associated with graver symptoms. In connection with the latter, no doubt it is a valuable aid to the diagnosis. The high value I place upon Mr. Flint's opinion, caused me to give exaggerated significance to the sign in question.

In conclusion, I will say, the inflated transverse colon rising in front of the liver, in my opinion, satisfactorily explains the total disappearance of hepatic dullness.

Case II.—**Bloodless Labor.**

I noticed in the January (1890), number of the *Atlanta Medical and Surgical Journal* the report by Dr. Leonard, of Blakely, Ga., of a case of "bloodless labor." I had a similar case about twelve years ago while resident in Virginia.

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The lady was a farmer's wife, and it was her first labor. My hands, after the delivery, showed no signs of blood, neither was there any on the newly born baby. I then carefully examined the external genitals of the woman and found no appearance of blood. There was no appreciable discharge of any kind from the vagina during her lying-in period. She made a prompt "getting-up" with not an untoward symptom.

When her baby was probably three weeks old, I was called to see her for some gastric derangement, and, upon questioning, found some of her wise (?) neighbors had told her unless her "sickness" came on she would certainly die, and had induced her to take "hot teas" of various kinds to bring it about, but they failed to bring about anything but a deranged stomach.

I was with her at her next confinement, which was perfectly regular in all respects.

Correspondence.

New York Medical Examining Boards Ordered—Preliminary Examinations of Medical College Matriculates—Capacity of Stomachs of Infants—Lesions in Summer Diarrhœa of Infants, and Treatment of the Disease—Mount Sinai Hospital—Pyoktannin, the New Bactericide—Hydrophobia Craze.

Mr. Editor—Governor Hill has signed the *New York Medical Examiner's Bill*, which passed the State Legislature some time ago. Under the Act, there shall be three separate Boards, consisting of seven members each; one Board to represent the New York State Medical Society, one the Homœopathic Medical Society, and one the Eclectic Society.

Each Board shall meet one or more times in each year for examination of candidates. The members of the several Boards are appointed by the Board of Regents of the University of New York, after having been elected by their respective Societies.

Heretofore, any one desiring to obtain a license to practice medicine and surgery in this State, must have been a

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graduate of a recognized school of medicine in New York State, or, if from any other State, his diploma would have to be endorsed by the faculty of one of the New York schools, with the certification that the requirements for graduation and the general standard of his school were substantially the same as here. The new law, especially in the matter of the three Boards, was made against the urgent protests of the medical as well as the popular press, together with the prominent regular medical organizations and some distinguished homœopathists.

There was further legislation in regard to the *preliminary examination for matriculation in the various medical schools of the State.*

The candidate is now allowed to enter unchallenged, and with the privilege of standing the examination at any time during the three years prior to graduation most convenient to himself.

It is unfortunate that just as some move was being made to elevate the educational requirements preliminary to the study of medicine, that this ill-timed and injudicious legislation should be made, and promptly undo the good. The medical press is calling for concerted action next winter, to repeal the triple board law.

Dr. L. Emmet Holt, of the New York Polyclinic, has given the result of a series of observations upon the *stomach capacity of infants* after death. The series comprises one hundred and seven cases. He found that while at birth the average capacity was one ounce, there was a gain of one ounce per month up to the sixth month, and for every subsequent month one-half ounce up to one year, hence, at this time, the capacity was from eight to nine ounces. Care was taken not to distend the stomach overmuch, just enough fluid being used to smooth out the rugæ.

Dr. J. Lewis Smith, in discussing the *lesions in summer diarrhœa of infants* before the State Medical Society, stated that, in a number of autopsies made by him, he had found, with few exceptions, entero-calitis, especially in the region of the ileo-cæcal valve. When death was rapid, there was

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lacking the inflammatory condition of the alimentary tract; but the mucosa of the intestines was soft and sodden. The liver, probably, did not enter into the pathology.

As to the *dietetics and treatment* of the affection, he advised the use of country milk, preferably sent in cans, and not bottled, which must be sterilized with live steam for two hours.

Barley water may be given with benefit. The barley should be boiled a number of days. This form of starchy food is well sustained eaten by very small infants.

Bismuth was a safe and reliable antiseptic, and could be given in large doses, it being unabsorbed.

He thought that *opium does much harm when injudiciously employed*, but was of use in controlling irregular peristalsis and the consequent premature expulsion of food.

Lavage of the stomach was not to be recommended, and the majority of those present at the discussion were also against this mechanical procedure, especially in private practice, where it was apt to strike consternation to the hearts of the mothers.

Dr. Smith considered a purge of castor oil, administered as a preliminary step, to be excellent treatment.

Mount Sinai Hospital has recently had quite an extensive addition put to it. The new building faces on 67th street, and is connected with the hospital proper by means of an underground passage way. The structure is three stories high—the second floor being used as a dispensary, and the third as a training school for nurses. This latter is non-sectarian. Applicants must be twenty-one years of age.

Pyoktannin is the name of a new bactericide. It is the well-known methylanilin used by the microscopists as a staining agent in bacteriological work. It was first employed as a therapeutic agent in Germany, where it was used as a local application to sloughing ulcers of the cornea. It is said to interfere materially with the suppurative process, and to greatly accelerate the separation of sloughs and healing.

It is also said to exert a wonderful effect when applied to

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the surface of chronic indolent ulcers, whatever be their cause.

It is claimed that by its use chronic purulent discharges cease altogether, even when other antiseptics have been used without avail. It is applied by means of a pencil in bulk, the material being spread well over the entire diseased area. It gives no pain, and is extremely gratifying to the patient.

The virtues of pyoktannin are highly extolled by Dr. Adolph Kessler, of this city, who considers it the "ideal antiseptic and pus destroyer."

It is curious to note that the present *hydrophobia epidemic* sprang into existence nearly simultaneously with the establishment of the Pasteur Institute in this city. It is certainly highly improbable that this apparent spread of the rabies is a real one, and due solely to some definite organic cause. The daily papers contain numerous instances of death from hydrophobia, entering into the details of the agonizing sufferings of the unfortunate victims of this terrible disease, with fascinating minuteness.

It is not improbable that this species of "penny dreadful" literature may crystallize in the fervid brain of a neurotic individual, and so work upon his distempered imagination that, recalling some injury inflicted by an animal, *post hoc, ergo propter hoc*, symptoms are developed closely resembling those of hydrophobia, and which may even lead ultimately to a fatal issue. The supply must meet the demand; and as the Pasteur Institute gives a definite form to the demand, the cases multiply.

Dr. Gibier, however, seems thoroughly in earnest; and though it may be an instance of pouring water into a rat-hole, he carries out his treatment with the utmost scientific nicety.

Whether there is a grain of truth in the craze, or whether it is an analogue of the dancing-sickness of Spain, or the mewing-mania among the nuns of Germany, which was so promptly suppressed by the correcting red-hot poker, in the

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hands of the illustrious Boerhaave, we are left to conjecture.

It is probable, however, that the so-called hydrophobia epidemic will resolve itself into *vox et prætera nihil.*

Reunion of the Surgeons of the Medical Corps of the Confederate States Army and Navy, Chattanooga, Tenn., July 2d, 3d, 4th, and 5th, 1890.

CHATTANOOGA, TENN., July 6th, 1890.

Mr. Editor,—We feel assured that many of the surgeons of the Civil War of 1861–1865, who are the friends of the *Virginia Medical Monthly*, will regard with interest the first reunion of the United Confederate Veterans since the close of hostilities.

It is not our purpose to report the eloquent speeches of Generals Gordon, Kirby Smith, Cabell, and other distinguished Confederate veterans; we desire to confine our brief notes chiefly to the meeting of the survivors of the Medical Corps, and here to record our appreciation of the sincere welcome of Chattanooga. The press and the people, on every hand, manifested a cordiality never excelled elsewhere. [We regret not having space to make extracts from the speeches and editorials of welcome.]

Among the many distinguished Confederate veterans present at the reunion of the Medical Corps in Chattanooga may be noted Dr. E. A. Flewellen, formerly Medical Director of the Army of Tennessee; Dr. J. B. Cowan, Chief Surgeon of General N. B. Forrest's Cavalry; Dr. R. C. Divine, of the Medical Service of the Army of Tennessee; Dr. Jno. B. Morton, Chief of the Artillery of General N. B. Forrest's Cavalry; Doctors and former Surgeons of the Confederate States Army: R. Z. Rudesel, G. W. Howard, A. P. Ebbart, J. T. Thomas, J. H. Currey, Robert Battey, T. G. Green, W. B. Wells, W. C. Bandige, J. D. Talbert, and others.

Dr. Cowan is 58 years of age, and in the enjoyment of vigorous health, and attends a large practice in and around Tallahoma, Tenn.

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The handsome Dr. Green has renewed his youth in his beautiful home in Lookout Mountain; and although actually 62 years of age, does not look to be much above 35.

Dr. E. A. Flewellen, although 70 years of age, is active and vigorous, and marched arm and arm with Dr. Joseph Jones, of New Orleans, in the grand parade of United Confederate Veterans on the 4th of July. Dr. Flewellen is a bachelor, and this may account for his spruce appearance and nimble walk in "*light* marching order," without the *regulation baggage* of the common *pater familias*. He looks to be about 50 years of age, and as if he would last 50 years more. He had been placed by the Surgeon-General in the list of dead, but proved to be the best and liveliest veteran in Chattanooga.

Dr. E. A. Flewellen was the Medical Director of the Army of Tennessee in 1863, when the battle of Chickamauga was fought on the 19th and 20th of September. This was one of the bloodiest battles of the Civil War, as will be shown by the following consolidated summary:

Corps.	*Killed.*	*Wounded.*	*Total.*
Polk	440	2,891	3,331
Hill	311	2,354	2,665
Buckner	436	2,844	3,280
Walker	367	2,045	2,412
Longstreet	260	1,656	1,916
Forrest	10	40	50
Grand total	1,824	11,830	13,654

The killed and wounded at Chickamauga exceed those of the famous battles of Shiloh or Pittsburg Landing, as will be seen from the following reports of killed, wounded, and missing, in the engagements of the 6th and 7th of April, 1862, at Shiloh Church:

Corps.	*Killed.*	*Wounded.*	*Missing.*
1st Corps—Major-General Polk,	385	1,953	19
2d Corps—Major-General Bragg,	553	2,441	634
3d Corps—Major-General Hardie,	404	1,936	141
Reserve,	386	1,682	165
	1,728	8,012	959

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The total casualties of the Army of Tennessee in the battles near Chattanooga including that of Lookout Mountain, Mission Ridge, and Ringgold Gap, November 24th, 25th and 26th, 1863, were—

Killed	328
Wounded	2031
Total	2359

The Confederate loss around Chattanooga in the battles of Chickamauga and Lookout Mountain and Mission Ridge:

Killed	2,152
Wounded	13,861
Total	16,013

We copy the following report of the *Meeting of the Survivors of the Medical Corps of the Confederate Army and Navy* from the *Chattanooga Evening News* of Thursday, July 3rd, 1890:

Joseph Jones, M. D., Surgeon-General of the Confederate Veterans, received a very warm welcome from his brother physicians at N. B. Forrest Camp last night.

Dr. Jones is from New Orleans. He is apparently about 60 years old, with a remarkable healthy appearance, and is still the possessor of a soldier's bearing. He was introduced to the physicians present in a very pleasant manner by Dr. G. W. Drake.

Dr. Jones stated that at present his attention was engaged in consolidating the entire medical history of the Confederate Army. He paid a handsome tribute to Chattanooga in speaking of its wonderful growth, its vast mineral resources and great historic interest. The ride to the top of Mission Ridge on an electric car was one of the most beautiful, he said, while the pleasure of visiting Lookout Mountain, with its historic greatness, was unsurpassed.

An organization of Medical Relief Corps was proposed by him, as accidents were likely to occur, and there would be danger of sunstrokes, which would require the aid of the medical profession.

The following physicians are requested to go on duty to act as a Medical Relief Corps, and go on duty at the places designated, during the 3rd, 4th, and 5th of July, beginning

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at 8 A. M. each day. They will be relieved hourly, and take their turns in the order named:

At L. J. Sharp & Co.'s: Drs. E. A. Cobleigh, J. L. Gaston, G. M. Ellis, J. F. Sheppard, W. P. Creig, E. E. Kerr, W. B. Lee, Frederick B. Stapp, I. S. Dunham, D. E. Nelson, C. S. Wright, R. F. Wallace.

Snodgrass Hill: W. T. Hope, J. L. Atlee, Vaulx Gibbs, C. F. McGahan, W. B. Wells, A. M. Boyd, J. J. McConnell, W. C. Townes, Cooper Holtzclaw, A. P. Van Deveer, T. C. V. Barkley.

Courthouse: L. Y. Green, J. E. Reeves, G. A. Baxter, H. L. McReynolds, H. B. Wilson, F. M. Leverson, B. S. Wert, W. G. Bogart, E. B. Wise, H. Berlin, Y. J. Abernathy, J. R. Rathwell.

Joseph Jones, Surgeon-General United Confederate Veterans.

G. W. Drake, Medical Director.

P. D. Sims, Chief of Staff.

L. H. Wilson, Register.

All visiting physicians and surgeons of the C. S. A. and C. S. N. are requested to register at L. H. Wilson's drugstore, 829 Market street.

After the Committee was appointed, Dr. Jones read his report to General John B. Gordon, Commander United Confederate Veterans. The report was a very interesting one, and comprises more vital statistics in regard to the Medical Department of the Confederate Army than anything else that has ever been produced.

[It was published in full in July No., 1890, of the *Virginia Medical Monthly*.]

Dr. J. E. Reeves delivered a short address, in which he complimented Dr. Jones very highly in the manner and thoroughness of his report, and in conclusion offered a motion to appoint a committee to draft suitable resolutions in regard to Dr. Jones' report. The following gentlemen compose the committee: Drs. Drake, Holtzclaw, Hope, Reeves, and Howard.

A recess of a few minutes allowed the Committee time to retire and draft resolutions. The following are the resolutions, which were unanimously adopted:

Whereas we have been honored by the presence of Dr. Joseph Jones, Surgeon-General of the United Confederate Veterans; and

Whereas we have heard his able report to the illustrious Gen. John B. Gordon, Commanding General of the United

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Confederate Veterans, whose presence will also grace this reunion occasion; therefore,

Resolved, That we, surviving members, etc., and the medical profession, tender to Dr. Jones our gratitude for his very able presentation of the objects to be gained by the assembling of the survivors of the Medical Corps of the Confederate Army and Navy.

Resolved, That he has placed the whole medical profession of the United States under obligations for his self-sacrificing labor in raising from oblivion the priceless statistics relating to the medical history of the Confederate Army and Navy.

Resolved, That we bespeak the earnest co-operation of the surviving surgeons of the Confederate Army and Navy in his efforts to procure the imperishable Roster his unselfish labors have so auspiciously begun.

Resolved, That a copy of these resolutions be furnished the press for publication.

The following insignia, prepared by Surgeon-General Joseph Jones, will be adopted and worn by surviving members of the Medical Corps of United Confederate Veterans: Silver disk, one inch in diameter, containing a gold cross on each side, on which are thirteen stars; on face inside edge, "Medical Corps, C. S. A., 1861–65." On reverse,—"United Confederate Veterans, 1890." Name and rank of officer on both faces.

After a short discussion, the meeting adjourned.

The following chairmen of committees will look after the visiting physicians from the States which they represent:

Alabama—B. S. West, 714 Market strert.
Arkansas—G. A. Baxter, 115 East Eighth street.
Florida—F. T. Smith, 10 West Ninth street.
Kentucky—L. Y. Green, Lookout Mountain.
Louisiana—W. L. Gahagan, 10 West Ninth street.
Maryland—E. A. Cobleigh, 729 Chestnut street.
Mississippi—N. C. Steele, 722 East Seventh street.
Missouri—H. L. McReynolds, 638 Market street.
North Carolina—T. G. Magee, 518 Georgia avenue.
South Carolina—C. F. McGahan, Richardson block.
Tennessee—P. D. Sims, 713 Georgia avenue.
Texas—E. B. Wise, 713 Georgia avenue.
Virginia—G. W. Drake, 320 Walnut street.
West Virginia—J. E. Reeves, 20 McCallie avenue.
New England States—E. M. Eaton, 20 East Eighth street.
Middle States—F. M. Severson, 826 Market street.

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Western States—J. J. Durand, 208 Vine street.
Northwestern States—E. E. Kerr, 709 Market street.
Canada—G. M. Ellis, 826 Market street.
Foreign Countries—H. Berlin, 600 Market street.

G. W. DRAKE, M. D.,
Medical Director.

The Medical Faculty of Chattanooga, under the able leadership of the Medical Director, Dr. G. W. Drake, were untiring in their kind attentions and generous hospitality to the survivors of the Medical Corps, and to the United Confederate Veterans.

Dr. George Little reports the height of different points on Lookout Mountain as follows: Round Mountain, 2,000; Lookout Point, 2,126; High Point, 2,488; Round Top, 2,678.

It will be seen that Round Top is 270 feet higher than High Point, the station where the government geological survey is to spend this summer, taking triangulations, locating distant points. From the top of this height bearings will be taken. This is done by the aid of assistants who, miles away, place mirrors at such angles as to reflect the sun's rays against the station on top of the mountain, when the exact bearing can be taken and the spot marked over which the mirror was placed. In this way a correct map can be laid out, and with the distances the bearings between points, separated from each other by ranges of mountains, can be taken.

NEGLECTED GRAVES.—During the occupation of Chattanooga by the Confederates prior to September, 1863, there was a hospital on Lookout Mountain, at the old Lookout house.

This was a noted place, and many sick and wounded were treated at the place while used for that purpose. Many, too, of the most dangerous cases, and out of so many some, as a matter of course, died, and were buried on the side of the mountain below, with no head-mark except a temporary board.

These, in time, became obliterated; and as the burial place fell into other hands, they have been neglected. Being from all parts of the country, and strangers, they were forgotten in the peace that followed, until the Chattanooga and Lookout Mountain Railway Company dug up the bones of some in the construction of the line. The discovery of

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bones caused inquiries which brought to mind the facts above stated. When it was learned that the bones were those of Confederate soldiers, they were turned over to the Ladies' Confederate Memorial Association, who interred them in the Confederate cemetery. Later investigation has shown that a large number of them still remain, and steps are being taken to have the cemetery improved and fenced. The burial ground lies on the line of the Lookout Mountain Railway, near Clift station. Looking to this end, J. G. Burton and Dr. Simmonds have been appointed a committee to solicit subscriptions, and have succeeded in procuring some funds, and Alfred Dickey Foy, naturalist on Lookout Mountain, has agreed to donate a set of rustic furniture, to be placed on sale, the proceeds to be applied to making the proposed improvements.

Capt. J. F. Shipp has proposed to put up a fence on conditions that the project meets with a favorable consideration.

It is not known how many are buried at the place, but inquiry will be made of Mr. Crabtree, of Chickamauga, who, it is said, made coffins, and may have kept a memorandum of them. It is supposed that a very large number rest there.

The enterprise is worthy of being carried out, and the necessary funds will doubtless be raised during the reunion.

With best wishes for the continued and abundant success of the *Virginia Medical Monthly*, and for the continued good health of its able and learned editor, your correspondent remains,

CONFEDERATE SURVIVOR OF CHICKAMAUGA.

In a Case of Epilepsy of Thirty Years' Standing,

"I used Peacock's Bromides with marked success and decided benefit. Patient had from three to six seizures usually in twenty-four hours. Under the use of Peacock's Bromides, the patient is almost entirely free from attacks, and otherwise generally improved."—J. S. BRUNNER, M. D., Bay Port, Fla.

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Proceedings of Societies, Boards, etc

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

[J. W. Henson, M. D., Reporter.]

Dr. Wm. W. Parker, President, in the Chair.

June 10th.—**Nitro-Glycerin in Paroxysmal, Spasmodic Indigestion**

Dr. J. N. Upshur reported the case of a lady aged 54 years, very much "run down" from mental and physical overwork. The peculiar feature was a severe periodic spasmodic pain, occurring about every ten days. It was chiefly about the pylorus and ran downwards to the right along the edge of the ribs. When the doctor first saw her, she had had three of these attacks at intervals of about twelve hours. The first he relieved in a few hours with morphia and atropia hypodermically; the second, with two doses each of $\frac{1}{50}$th grain of nitro-glycerin, and the third, with one dose of $\frac{1}{50}$th grain. No eructation of gas and water followed the last attack as had always been the case before. The general treatment was a light nutritious diet, attention to bowels, and phosphate of iron, quinine and strychnine. She had no recurrence of the pain.

Nitro-glycerin was suggested by the fact that the pain, in its acuteness, resembled the spasm of angina pectoris. He had much confidence in it for the relief of the œdema, dyspnœa and cardiac distress of Bright's disease. He had tried it with much success for the temporary relief of aggravated sciatica. Though slower in action, its effects were more permanent than nitrite of amyl.

June 24th.—**A Sequela of la Grippe.**

Dr. W. W. Parker reported the case of a robust young man who had influenza during the epidemic. This attack was accompanied by an inflammation and considerable swelling of the muscles of the neck, and this, in turn, was followed by a frightful eruption of vesicular character over the whole body, very much like chicken-pox. It was particularly marked upon the lips and inner side of the thighs, where it resembled and might have been mistaken for confluent small-pox. It continued ten days or two weeks, leaving the extremities first and gradually. There was no fever, and only very slight constitutional disturbance of any kind; no itching of consequence.

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Singular Experience with Scarlet Fever and Measles.

Dr. Wm. B. Gray reported the cases of two children, aged respectively 2 and 4 years, affected with scarlatina, that just about the commencement of desquamation, the older one developed the eruption of measles. In four or five days, the younger did the same. Furthermore, about this time, the father, an old man, took scarlet fever.

Hæmatoma Auris.

Dr. Chas. M. Shields reported a case of hæmatoma auris occurring in a lawyer about 60 years of age, and perfectly sound in mind. This trouble very rarely appears except in the insane. About a month before the appearance of the growth, the man had suddenly lost consciousness one day, and in falling had bruised the side of his face corresponding to the trouble. The doctor enlarged an opening found upon the anterior wall of the canal, about half an inch from the external orifice. The cavity into which it led would hold about five or six drachms. The discharge was *very* offensive. Dr. Shields prescribed a wash of peroxide of hydrogen. From one Saturday night until the following evening, the patient had five or six hæmorrhages, losing in all about 20 or 30 ounces of blood. The only perfect control of the flow was secured by packing the cavity with cotton saturated with Monsel's solution. The doctor thought the man would recover but with a considerable scar.

Insanity following la Grippe.

Dr. M. D. Hoge reported the case of a man who, since his attack of la grippe, had fallen into a state of melancholia, almost amounting to insanity. He suffered excessively from nervousness and an intense pain in the head—the latter being treated successively with morphia, cocaine and bromide of potassium. He still complained of great pain in the head, until one night he pounded himself over the head with a poker until he had peeled off a large piece of scalp and produced enormous hæmorrhage. He then felt better. Some time later, the doctor found a sequestrum of bone (a portion of the external table) in the wound, which he removed, and the part began to heal beautifully. The man was very much depressed all along, believed himself going crazy. Complained of hearing voices. The doctor reasoned him out of that state, and pronounced him now upon the road to recovery.

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Analyses, Selections, etc.

Bronchitis.

Ætiology.—Grant[1] furnished a case illustrating the relation existing between *gout and bronchitis.* On several occasions he had been called to see a man suffering from tenderness in the epigastric region, nausea, marked flatulence with eructations, severe dyspnœa, and the physical signs of acute bronchitis. The urine was loaded with urates, and great prostration was present. A typical gouty inflammation of the great toe supervened, and simultaneously his other symptoms subsided.

Wert[2] found *plastic bronchitis* to occur frequently after pneumonia, and in many cases to be associated with grave *skin affections.* There seemed in one case also, to be a relation between the formation of cast and the catamenia.

Pathology.—Picchini[3] describes the progress, in two cases, of bronchitis fibrino-hæmorrhagica, which came under his observation. First, a hæmorrhage took place in the lumen of the bronchus and a coagulum formed. Around this, little hæmorrhage occurred; the epithelium of the mucosa disappeared, and a small celled infiltration of the bronchial walls, the sub-mucous vessels enlarged and a hæmorrhagic extravasation exuded from them into the surrounding connective tissue. By this means, the bundles of connective tissue were separated; at last there appeared a peri-glandular small celled infiltration. The micro-organisms consisted of three different kinds, and possessed great vitality, but soon lost their pathological strength.

Stirling,[4] in his case of plastic bronchitis, found the casts, which were expelled in great numbers, to be white, and but a few stained with blood. The majority measured from three to four inches, some as much as six inches in length. As in other cases, most of these came from the small and medium sized bronchi, but in some instances the main branches represent tubes of large size, as it is not at all infrequent to find a diameter of almost half an inch, and fragments even thicker have occurred. They divide dichotomously and are of such firm consistency as to bear frequent handling with little injury. The majority are solid, some are hollow. They have evidently been deposited in successive layers, and consist of concentric laminæ, which can be separated when dry. From this formation, it is reasoned by this author, that a considerable amount of the ex-

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udation takes place in the larger bronchi, and is drawn into the smaller by efforts of inspiration. As regards chemical composition, they consist of coagulated albumen solution in alkalies. Under the microscope they showed fibrillar material, in the meshes of which are numerous leucocytes and fat globules, some hæmocytes and epithelial cells. Octahedral crystals, said to be similar to those found in bronchitic asthma, have been observed by others, but he had not been able to find the spirals seen by Curschmann.

Caussacle[5] reports one of the most remarkable cases of pseudo-membranous bronchitis which has a place in medical literature. He found, with the aid of chemistry, a special nature of the fibrinous blocks which has hitherto been undescribed, viz: that the syntonine enters into the fibrinous blocks. Histology revealed a structure in these blocks of membrane analogous to the coagulations of aneurisms.

Eklund[6] reports a case of bronchitis fibrinosa, in which the patient first had hemoptysis, then a heavy sensation in the chest, and later succeeded in expectorating some casts with blood. These casts were of a grayish color, were somewhat cylindrical in shape, and had ramifications of varying length from 9–140 centimeters. The largest tube was as thick as a goose quill, and it continued in ramifications thread like in thickness, some ending in loops. No more physical signs of affections of the lungs, pharynx or larynx were present. There was no more cough, pain in the chest or dyspnœa. Ordered opium and acetate of lead. He observed some blood in the expectorations later, but the coughing was insignificant, and the patient continued her work. The pharynx was covered with yellow, thick, purulent masses and a dry mucus.

Symptomatology—West[2] found plastic bronchitis characterized by the occurrence of paroxysms of cough and dyspnœa which immediately cease on expectoration of the casts. The paroxysms are usually preceded and followed by a sort of catarrh. Hæmoptysis may be absent or it may be very serious. It usually at once ceases with the ejection of the casts. As a general thing but little pain is present except that caused by coughing. In acute cases the temperature may arise to 104 F. In chronic cases it is seldom above normal. Sometimes the onset of an attack is marked by one or more rigors suggestive of pneumonia. As a rule each attack consists of a number of short paroxysms. It may subside after a few days, never to recur again, or may last continuously for 10, 15 or 20 years.

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Stirling[4] gives an accurate description of the physical signs found in a case of chronic plastic bronchitis. Chest symmetrical, expansion movements exceedingly slight laterally; anteriorly and posteriorly, normal. Percussion note impaired behind at bases, elsewhere it lacks fullness. Breath sounds practically inaudible over front and back, intense hollow blowing over the vertebræ above the level of the scapular spine. In the lower third of the left lung, front and back, friction like sounds at the end of inspiration, which posteriorly were broken up; these resembled very thick creaking râles. On the right lower third in front, some rumbling was audible with inspiration. The cardiac impulse was weak but definite in the fifth left intercostal space, a little within the nipple line. Heart sounds slightly dull; præcordial dullness ordinary.

Treatment.—Simon[7] recommends the careful surveillance of the secretions of urine in the management of capillary bronchitis in infants. The suppression may be the principal cause of the dyspnœa. If this occurs, he gives digitalis not in syrup or tincture, but 15 centigrammes of the powdered leaves in infusion 3 times in 24 hours.

At the same time he places a cataplasm over the kidneys and also dry cups. The cardiac contractions take on a more regular rhythm, and the urinary secretions are restored.

Burmann[8] recommends the use of iron in its strongest and most astringent forms in bronchitis, when collapse threatens from suspended respiration due to abundant secretion, and thus to imperfect äeration of the blood.

Murrall[9] highly commends inhalations of chloride of ammonia by means of an apparatus. This has been very successful in his hands, and he cites a number of cases cured by this remedy.

Dembitz[10] recommends apomorphine as an expectorant for infants, instead of ipecac. His formula of administration is: Apomorphini muriatis, gr. $\frac{1}{8}$ to $\frac{1}{2}$; aquæ destil. ℥iv; acid hydrochlorat, gtt. v; syr. simple ℥j. M. S. Take one teaspoonful every two hours. Collapse need not be feared and the apomorphia disturbs digestion less than ipecac. He considers musk the respiratory stimulant *par excellence.* He does not allow infants to sleep too long at one time, or to lie a length of time in the same position. If crying makes them cough sometimes, it is all the better. The child should be carried about and its position frequently changed, in order that the secretions may be given less opportunity to settle down and occlude any one part of the smaller

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tubes. Much mucus may be expelled in producing increased movement of the chest walls by means of pressure applied to the chest, like artificial respiration.

Lautier[11] relates a number of cases in which success was attained with the essence of pinus pimilio put up in transparent gelatine capsules the size of a small pea.

Flascher[12] recommends the juice of bananas as one of the best remedies in chronic bronchitis, with insufficient expectoration and marked dyspnœa. He has never observed bad results to follow its administration. He prescribes a drachm 8 or 10 times a day during the first days, and later the dose can be diminished. He thus advises the preparation of the syrup to be: Cut the fruit in slices, place it in a glass vase, sprinkle with sugar and close. The vase is then enveloped in straw, placed in cold water and heated to boiling. The bottle is then removed and allowed to cool, and the syrup poured into small bottles.

Kisch[13] found pharmacy and mineral waters inadequate in relieving a case of chronic fibrinous bronchitis. He considers the malady rare, its diagnosis dependent upon the chemical and histological examinations of the concretions expectorated. He thinks the ætiology and treatment to be as yet unexplored territory.

Stirling,[4] in plastic bronchitis, commends inhalations of alkalies, especially aqua calcis, alone or with equal parts of water, or with 2 to 5 per cent. of carbonate or bicarbonate of sodium, in which the casts are soluble. An emulsion of turpentine, copaiba and oleoresin of cubebs to increase the plasticity of membrane. Removal to a warm, soothing climate would probably be more useful than drugs.

Simon[7] advises stimulants in children as champagne, egg-nog or toddies. He finds quinine most valuable during the entire course of the disease. It is usually administered in from ½ to 3 gr. doses, and is best given as a potion in glycerine, with the addition of a little tartrate syrup. The child is well wrapped in bed and large sinapisms placed to the chest.

(1) Grant, *Brit. Med. Journal.* *Gaillard's Med. Journal*, May, 1889. (2). *Practitioner*, August, 1889, *N. Y. Med. Record*, November 9, 1889. (3) Pirchini, *Riv. Clin. Arch. Ital. di Chir. Med* 1 p. 105, 1889. *Schmidt's Jahrb.*, October, 1889. (4). Stirling, *Practitioner*, June, 1889. (5). Caussade, *Bull. Soc. Anat.*, May 10, 1889. (6). Eklund, *Tr. Med. Ass. Univ. Upsas.*, vol. 24, 1888. (7). Simon, *L'Abielle Medical*, June 3, 1889, Med. News, June 20, 1889, L'Union Med.

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Hypertrophy of the Prostate Gland—An Addition to McGuire's Operation.

Dr. Robert T. Morris, in a lecture published in the *New York Medical Journal*, July 19th, reports the case: The patient, about sixty years of age, is suffering from obstruction at the neck of the bladder. For more than a year he has been obliged to draw his urine with a catheter; lately it has become difficult for him to pass the instrument. The patient has been under a well-known general practitioner, who has exhausted the ordinary resources for relief; now the patient is suffering from an aggravated chronic cystitis, with frequently recurring septic symptoms.

For the past two days the patient's bowels have been opened freely in order to facilitate the elimination of septic products. Hot tobacco fomentations have been applied over the hypogastric region to quiet the inflamed and irritable bladder; nothing else is so effective. A leaf of tobacco is moistened in hot water and placed over the hypogastric region. A towel wrung out in hot water is placed over the tobacco, and over all we need some material like oiled silk or dry brown wrapping-paper, to prevent evaporation.

To limit fermentation of the urine, the patient has been given ten grains each of boric and benzoic acids internally three times a day, and his muddy urine has cleared up very nicely. In addition, it is usually a good plan to have the patient draw his urine at least once daily while he is in the knee-elbow position, for by this procedure he can remove residual urine that could not otherwise be obtained.

In this case the lateral lobes are markedly but evenly enlarged. It is not the size of the gland that causes disturbance, but the character of the enlargement. A few men possess a series of prostatic tubules dorsad of the urethra, which form the so-called third lobe, and when we have median centric hypertrophy, a small third lobe may act as a ball valve in shutting off the entrance to the urethra.

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Then, again, when one of the lateral lobes is much larger than its fellow, a tortuous urethral canal must be the result, and it frequently requires much skill to pass an instrument into the bladder. In addition to the obstacles enumerated, we often find the mouths of the prostastic ducts so much enlarged that they will admit the tip of a catheter, and no one but the specialist knows what dangers await the patient if he is to have numerous examiners.

The prostate gland in various animals develops and degenerates coincidently with the testicles, and it is at about the time when the testicles normally atrophy in man that prostatic hypertrophy occurs. This condition is found in a relatively small number of men, however, and is really a degenerative process, consisting in elongation of the prostatic tubules and increase in the unstriped muscular fibres, the prostatic secretion at the same time becoming thin and watery. As degeneration continues, the tubules and muscular fibres are replaced by connective tissue, and when this process occurs in limited areas we have the so-called fibrous tumors of the prostate which are sometimes supposed to be homologous to the fibroid tumors of the sister organ.

The patient being under ether, Dr. Morris passed a double-current catheter into the bladder and washed it clean with a stream of Thiersch's solution (salicylic acid, gr j; boric acid, gr. v; water f ℥ j). The stop-cock on the discharge pipe of of the catheter is then closed, and the bladder fills with about twelve ounces of the solution, which is allowed to remain.

A rubber bag which will hold twelve ounces of water is oiled, slipped into the lower rectum, and then distended with air, so that on percussing the abdomen the fundus of the distended bladder is found carried well above the pubes by the lifting bag in the rectum. The skin about the pubic region has been previously shaved and scrubbed with bichloride-of-mercury solution, and by inserting the knife through this clean skin just over the symphysis pubis, a cephalad incision four inches in length is made. The next cut severs the tissues of the linea alba and the transversalis fascia and exposes loose fat which lies upon the bladder. This is picked up and snipped away with scissors in such a careful way that the surrounding areolar tissues are not disturbed, for we must remember that urine would enter a little rent and infiltration might lead to failure of the operation. The danger of opening the peritonæum is spoken of

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only by authors who have not had an opportunity to look at the peritonæum in this region. The next step in the operation consists in passing a couple of temporary sutures through the muscular wall of the bladder and fastening them to the skin in order to prevent the bladder from dropping back out of sight when the fluid which distends it runs out. The scalpel is now passed through the bladder wall at a low median ventrad point, and a finger instantly inserted into the opening prevents the escape of fluid until the interior of the distended bladder can be explored. There is no calculus to be found. Phosphatic calculi are very much commoner in these cases of enlarged prostate than is generally supposed, because various salts are precipitated when the residual urine ferments and becomes strongly alkaline. Many a practitioner is baffled by a case of catarrhal cystitis in conjunction with an hypertrophied prostate, because he does not suspect that calculi have formed in the patient's bladder.

This patient has an unusually hypertrophied third lobe to his prostate, and there is no well-defined pedicle. Otherwise Dr. Morris should enucleate the third lobe, leave the abdominal fistula open temporarily, and expect the urine to pass by the normal route a few weeks later. It will be safer here to make a permanent supra-pubic urethra. Hunter McGuire opens the bladder at the lowest available median ventrad point, and leaves open the cephalad extremity of the abdominal incision. The abdominal wound then being sutured elsewhere, we have left a fistula two or three inches in length, the walls of which are kept in apposition by the abdominal wall caudad to the external opening of the fistula, so that the patient can retain his urine or pass it at will. The suprapubic urethra in McGuire's operation is composed of cicatricial tissues, and it is difficult to tell just how far contraction will proceed, and Dr. Morris supposes that the region of the tract is apt to remain in a sensitive condition.

In order to overcome these objections, Dr. Morris resorted to a plan which has not been tried before, so far as he knows, and which may never be tried again. The original abdominal incision through the skin is lengthened two inches. A ribbon of skin and subcutaneous fat about three inches long and one-third of an inch broad is dissected away from either side of the abdominal incision, leaving the caudad extremities of the ribbons attached. The free ends of the ribbons are now sutured with fine catgut to the

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mucous membrane of the bladder wound, each on its respective side. The temporary sutures which held the bladder up are now cut, and as the bladder drops down, it takes with it the two ribbons of skin, which lie prettily face to face, and which are to form a soft urethra of skin. Iodoform is now rubbed gently into the deep portions of the wound, because it will make a thin, firm, protective coagulum with lymph, and turn aside urine that might otherwise infiltrate the tissues. The wounds of the abdominal wall are now closed with catgut, leaving room for drainage about the fistula. A short rubber drainage tube is introduced into the bladder, and this will be left in place for forty-eight hours—the patient lying upon his side or abdomen during this time, or until plastic lymph has sealed the wound securely against infiltration of urine.

The patient will be given ten grains each of boric and benzoic acids internally for several days, and the urine will by this means be converted into a "healing" fluid.

Four weeks after the operation the patient had made an uneventful recovery, and all of the sutured abdominal walls healed by primary union. The ribbons of skin now form a soft, round urethra. The patient can retain his urine or pass it at will, and he substitutes a glass drainage tube for the penis, pressing one end of the tube against the suprapubic meatus and passing urine through it. In order to do this, he makes an ordinary expulsive effort, and no urine passes by way of the penis.

Ectopic Gestation, Especially with Reference to Diagnosis and Therapeutics,

Is the title of an excellent review paper in *Gaillard's Medical Journal*, July, 1890, by Dr. George Tucker Harrison, of New York city. All are agreed upon the comparative frequency of extra-uterine frequency—the greater portion of cases ending, however, with premature rupture of the sac, and the formation of a hæmatocele or a hæmatoma.

As to *etiology*, the views of Virchow and Hecker have been fully confirmed, namely, "partial peritonitis, producing flexion and constriction of the tube, is a potent factor in the development of tubal pregnancy." Changes in the tubes, due to catarrh and blennorrhœa, are, no doubt, frequent causes also. Uterine myomata and tubal polypi are sometimes causes. In all cases of ectopic gestation, the uterus undergoes the same changes as in the beginning of normal pregnancy. The entire organ, with rare exceptions, becomes

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hypertrophic, and its mucous membrane is transformed into a complete decidual membrane. Tait admits the possibility of ovarian pregnancy, with the qualifying remark that "if it does occur, it must be rare, and will be curious." But that highest of living authorities, Virchow, declares that *no doubt could exist* in regard to the occurrence of ovarian pregnancy.

In Winckel's text-book on *Obstetrics*, a beautiful example is also illustrated. Yet whether, *primarily*, the fertilized ovum can become attached to the peritoneum, and undergo development (*abdominal pregnancy*), is doubtful, because it has not been demonstrated that tubal and ovarian pregnancy could be excluded in the cases heretofore investigated. *Tubal* pregnancy is the most frequent form we have to deal with. While the ovum may possibly develop between the folds of the ligamentum latum without rupturing the tube, the rule is that rupture takes place early in pregnancy—either into the broad ligament, or at the upper periphery of the tube, into the abdominal cavity. In the latter event, the ovum may escape into the abdominal cavity or between adhesions, or else the fœtus alone may be expelled while the placenta maintains its attachment. The degree of hæmorrhage will depend partly on the place of rupture—the placental site being most vascular—and partly on whether or not resistance is offered to the escaping blood by the connective tissue of the broad ligament, or by firm adhesions resulting from partial peritonitis.

Tait and Strahan are radically wrong as to the relations of tubal pregnancy to retro-uterine hæmatocele. The extra-peritoneal hæmatocele of Tait ought to be called hæmatoma. Retro-uterine hæmatocele is a blood tumor due to effusion of blood into the pelvic part of the peritoneal cavity, previously shut off from the remainder of that cavity by pseudo-membranes—Douglas' pouch being the usual seat of this effusion. What Tait calls *intra-peritoneal hæmatocele* is a free effusion of blood into the abdominal cavity, and is almost uniformly fatal. In such circumstances the blood fills the lower part of the peritoneal cavity by gravity, but no tumor is formed displacing the uterus forward. If, however, after rupture of a tubal pregnancy, the extravasation of blood takes place into a part segregated from the remainder of the abdominal cavity by pseudo-membranes, which will naturally be Douglas' pouch, between rectum and uterus, the blood will separate the walls of this space, displacing the uterus forward, encroaching on the limits of the rectum and

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forming, as a rule, a globular, well-defined tumor. Such blood-tumors can also be formed by a somewhat different mechanism. Effusion of blood into the broad ligament gives rise to a blood-tumor beside the uterus—a true hæmatoma.

Retro-uterine hæmatocele and *hæmatoma* can be distinguished. Tait ignores the existence of retro-uterine hæmatocele in its true signification; for him there is only extra-peritoneal hæmatocele—properly called *hæmatoma*—and free extravasation of blood into the abdominal cavity. To refute this error, it is only necessary, in addition to what has already been said, to invoke the high authority of Virchow, Ziegler, Klebs, and Coates.

Opinions vary as to the possibility of diagnosticating ectopic gestation in the early months. Tait maintains a skeptical attitude concerning the correctness of the diagnoses of those who speak confidently of making certain diagnosis in cases of tubal pregnancy before the period of rupture. Such skepticism is unjustifiable. Seven years ago Veit, of Berlin, operated upon an intact case of tubal pregnancy with success. He operated upon a second case, in which the diagnosis was made before rupture, and confirmed by the laparotomy. Dr. Harrison has seen four cases of tubal pregnancy prior to rupture. In one, the diagnosis was confirmed by extrusion of the decidual membrane from the uterine cavity. Dr. Thomas saw the case, and agreed with him. In a case in the practice of Dr. R. C. M. Page (Dr. Harrison in consultation), the patient had all the subjective signs of pregnancy, including obstinate vomiting. On the left side of the enlarged uterus was found a soft elastic tumor, which we diagnosticated as a tubal pregnancy. The fœtus was destroyed by galvanism, the vomiting thereupon ceasing as if by magic. True, we do not generally see these cases until rupture has taken place. Veit's diagnostic sign is the peculiar softness of the pregnant tubal sac, often so strikingly soft to the touch that it seems as if the finger could readily pass through the sac. Veit has not found any other tubal tumors similarly characterized. In addition, the pregnant tube shows a degree of *elasticity* peculiar to it. After blood has been effused into the tube, the differential diagnosis becomes much more difficult. In these circumstances, the fruit-containing sac becomes more tense, and is harder to the touch in consequence of effusion of blood into its interior and, possibly, in consequence of associated phenomena of peritonitis. The clinical phenomena of rupture are those

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of a free hæmorrhage into the abdominal cavity or those pertaining to hæmatocele or hæmatoma. In a case of the first kind, Dr. Harrison found palpation of the abdomen impossible on account of its extreme sensitiveness. The diagnosis, however, was confirmed by autopsy.

We may consider the diagnosis of a ruptured tubal pregnancy assured when suddenly the symptoms of severe internal hæmorrhage show themselves in a woman whose menstruation, usually regular, has ceased for one or two months, or who suffers from *atypical hæmorrhages*, and who considers herself pregnant, and, in addition, if large quantities of blood can be objectively demonstrated around and behind the enlarged uterus. The diagnosis is made absolutely certain if decidual membrane is extruded from the uterine cavity, accompanied by moderate hæmorrhage. In the later months of ectopic gestation, the diagnosis of pregnancy is generally easy, but the demonstration of the fact that the fœtus is outside of the uterus may offer difficulties. Accurate manual palpation will ordinarily, however, lead to recognition. The differential diagnosis between extra-uterine pregnancy and pregnancy in the rudimentary horn of a uterus unicornis is simply impossible.

Dr. Harrison's views with regard to *treatment* are so admirably stated by Olshausen that he cannot do better than to quote his conclusions:

"1. In the first months of an extra-uterine pregnancy, *before rupture*, if the diagnosis seems certain, laparotomy and extirpation of the fœtal sac are indicated.

"2. *After rupture has occurred*, during this period, operative intervention is indicated only when the phenomena assume a threatening character.

"3. If the first months of an ectopic gestation, with or without phenomena, have passed, *and the ovum continues to grow*, we ought to operate, and the sooner the better.

"4. In the second half of pregnancy, whether the child be living or dead, and without regard to its viability, an operation is indicated, because delay brings more danger than the operation.

"5. If possible, the entire fœtal sac should be extirpated. If not, it should be sutured to the abdominal coverings and drained above. Elytrotomy and drainage into the vagina should not be employed.

"6. For the control of dangerous hæmorrhages during the operation, the rapid ligation of the spermatic and uterine arteries are to be recommended.

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"7. In individual appropriate cases the future must decide whether it is not best to leave the placenta and immediately close the abdomen."

The proper treatment, *before rupture*, is laparotomy, with extirpation of the sac. Even after the fœtus is killed, the patient's life may be terminated by hæmorrhages or peritonitis. When rupture has occurred, Tait advises immediate operation, unless the hæmorrhage is into the broad ligament, forming a hæmatoma. In the latter event, no surgical intervention is demanded. When the hæmorrhage, however, is into the abdominal cavity, laparotomy and extirpation of the sac are indicated. If the result of physical exploration showed the presence of a tumor near the uterus, whether hæmatocele or hæmatoma, treatment should be *expectant;* but if no tumor is felt, and blood is effused into the free abdominal cavity, laparotomy is imperatively demanded in order to secure the bleeding vessels. Tait's success in these cases has been brilliant, and his operative *technique* should be carefully studied. Olshausen has operated eight times during the second half of pregnancy with uniform success. In the last five cases, the fœtal sac, with the entire contents, were removed. In the other three cases, the sac was attached to the abdominal coverings by sutures. In two cases, it was necessary to leave the placenta *in situ.*

The ideal operation is of course to remove the product of conception *in toto*, but at times it will be found that this is impossible without subjecting the patient to hazardous risk. Under these circumstances, it is better to give up the attempt at total removal of fœtal sac and contents. "For it is better for a patient to get well, after a long convalescence, with the extra-uterine ovular investments in the abdomen, than to die after the fulfilment of the ideal demand of a total removal of the fœtal sac."

Hydronaphthol in the Treatment of Enteric Fever and of Diarrhœa.

J. Michell Clarke, M. A., M. B. Camb., M. R. C. P., Lond., Assistant Physician and Pathologist to the Bristol General Hospital, etc., says (*Practitioner*, July, 1890,) that hydronaphthol, a new antiseptic in use for surgical dressings, is prepared from β-naphthol. It differs from it in being even less soluble in water, in melting at a lower temperature, and its solution in alcohol gives a deep yellow brown, instead of a green, color, with tincture of chloride of iron (U. S. P.). β-naphthol is not poisonous except in very large doses, but

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hydronaphthol is said to be absolutely innocuous. Like β-naphthol, it has a faint odor of carbolic acid, and leaves a pungent or burning after-taste in the mouth; but both these characteristics are less evident than in β-naphthol. In two cases of enteric fever treated by β-naphthol, the drug was discontinued on account of nausea and vomiting, probably excited by its use; hydronaphthol was substituted. In one case of enteric fever, however, in which the patient took hydronaphthol regularly, and eventually did very well, she twice vomited large masses of curd, apparently undigested; precisely what had occurred with β naphthol, and appeared to show that both compounds interfered with digestion. If these bodies check abnormal ferment-action, it would indeed seem likely that they should also hinder the ferment-actions that constitute the chief factors in the normal digestive processes, so that before again administering either hydro- or β-naphthol, it was necessary to find out, as far as possible, whether they did hinder digestion, and if so, in what manner.

Experiments show hydronaphthol to have a very distinct retarding influence on the digestion of egg-albumen by peptic fluids, to have a very slight effect on the digestion of milk by the same, and to have no effect at all on pancreatic digestion of milk or albumen, nor on the conversion of starch into sugar. Milk was chosen as representing all classes of food stuffs.

We may conclude that to most patients on milk only, hydronaphthol may be given without fear of serious interference with digestion; if there should be sickness whilst it is being administered, this is probably due to retardation of peptic digestion and accumulation of undigested curd in the stomach; in the latter case, give the remedy in pill form coated with keratin in order that it might pass through the stomach and first be set free in the duodenum. Mr. Clarke generally prescribed it in gelatin capsules, or simply suspended in milk, but it would probably be equally efficacious given in pill form, coated with keratin.

As to the dose, 2 to 3 grains every 2 hours is sufficient; in diarrhœa, after the first 3 to 6 doses, it may be given every 3 or 4 hours, provided the effect is maintained. For children under 1 year, the dose is ½ grain; to older children, ½ gr. to 1 gr. every hour or every 2 hours, or less often, according to circumstances.

Five cases of typhoid fever were treated with hydronaphthol; all did well, though two of the cases were severe and

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prolonged. The diarrhœa was very severe on admission in the two latter, but stopped soon after we gave hydronaphthol. In one case, 11 stools were passed on the day of admission, 10 on the next day when the remedy was first taken, and there was no further trouble from diarrhœa afterwards. In two other cases, the diarrhœa was at once checked; in one after two doses had been taken, and in all it was noticed that the stools, of which the odor had previously been highly offensive, lost this. This was also noticeable in the breath. Nausea was troublesome in two of the patients, so that in one, as the diarrhœa had stopped, the hydronaphthol was discontinued; in future, by taking the precautions advised above, this complication might be prevented. It is best to begin with grs. iij, or even gr. iv, every two hours in cases of enteric fever, and when the diarrhœa is checked, to give the same dose every 3 hours during the whole period of pyrexia.

Its beneficial effects in enteric fever led Mr. Clarke to give hydronaphthol in diarrhœas of various origin. He thinks it will be found a valuable remedy in the diarrhœa of children—with green-colored stools—so prevalent in late summer and early autumn. I have not had the opportunity of trying it on an extended scale, but of six cases in which he prescribed a dose of from 1 to 2 grains every 2 hours, in two the diarrhœa stopped within 12 hours, in three others it had stopped entirely in 36, and practically in 24 hours. In the other case it failed. These cases were not of the very severe type that one sees in the children of the poor during the late summer, but they show that the remedy has a marked effect on the disease. After administering hydronaphthol for 24 hours, or until the first stage is passed, a small dose of Dover's powder, regulated according to the patient's age, might be added with advantage.

Hydronaphthol was given with success in two patients, the subjects of severe dysenteric diarrhœa. In the first, a sailor, the diarrhœa had lasted 5 weeks, numerous remedies had been tried, but he was still passing 25 to 30 stools daily with tenesmus and the passage of much slimy mucus; he was very weak, anæmic, and emaciating. On milk diet and hydronaphthol, in dose of gr. iiiss every 2 hours, the evacuations in 4 days' time were reduced to 4 a day of much more natural appearance, and in 13 days he was cured. The second patient was a lady, who suffered from frequent paroxysms of ague, and had, for some time, been passing 6 or 7 stools daily with much mucus; after taking hydronaphthol

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gr. iiss every 4 hours for 3 days, the stools were firmer, contained less mucus, and were reduced to 3 a day; in 8 days' time the mucus had disappeared, and the motions now came down to 1 or 2 in the 24 hours, of natural appearance, and passed without pain. She has remained quite free from diarrhœa.

In a case of dysenteric diarrhœa in a boy æt. 5, the remedy gave no relief, but the boy was allowed all kinds of food, and did not take his medicine regularly, so that it had hardly a fair trial.

In a girl of 14, who suffered from tuberculous consolidation of both apices, together with tuberculous disease of the bowels, there had been constant diarrhœa for two months. This was stopped in one week after she had taken hydronaphthol gr. ij every 3 hours; a teaspoonful of cod-liver oil was given twice a day as well.

In two or three cases of ordinary diarrhœa in adults arising from errors in diet, chill, etc., it was found an effectual remedy, putting a stop to the diarrhœa after the first few doses. On the other hand, in other cases of similar nature it gave no relief.

In cases of flatulent dyspepsia and of dilatation of the stomach in which disorders the occurrence of abnormal fermentative processes is a marked feature, and productive of much pain and discomfort, I have not hitherto found that hydronaphthol has been of much service, although one would have anticipated from the foregoing conclusions that it would give relief; perhaps its failure is to be attributed to its prolonged stay in the stomach, in cases of this kind, having a prejudicial effect on the already feeble peptic power of the gastric juice.

Creosote in Therapeutics.

Dr. Joseph Adolphus, Atlanta, Ga., says (*Chicago Medical Times*, July, 1890,) that creosote was a prominent agent in the treatment of bowel complaints of all kinds previous to the use of carbolic acid in practice. This latter substance is the general agent by which creosote is sophisticated. Genuine creosote consists of 60 per cent of guaiacol. This principle is the most essential therapeutic agent.

Creosote is sparingly soluble in water and in commercial glycerine. On water it floats like oil; the reverse of these two properties is true of carbolic acid. Creosote is an oily substance, has a smoky odor, and often the smell is strongly so. When adulterated with carbolic acid (which is common)

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it mixes with glycerine and sinks in water; even 10 per cent. carbolic acid adulteration will cause this to occur.

The best test of creosote is the Halasinetz. Dissolve 50 grains of pure caustic potash in 240 minims of alcohol. Mix 4 minims of creosote and 45 minims of this test in a small vial, and shake vigorously. If the creosote is unsophisticated, in a few minutes crystallization begins and hastens to complete solidification—the process being complete in twenty minutes. When carbolic acid is in creosote, the experiment is either unsatisfactory or negative. He has seen, when 10 to 15 per cent. of so-called "coal tar creosote" is present, a slight attempt at crystallization, but one who has witnessed the behavior of pure beechwood tar creosote under this test will never be misled by the feeble reactions of a sophisticated article. One test quite popular, but not reliable, is, carbolic acid will form a coagulum when added to collodion; creosote will not. However, if the latter is adulterated with only 10 or 15 per cent. of the former, the coagulum may not form, or only slightly.

Some Uses of Creosote.—When the gastric and duodenal *mucous membranes are catarrhal*, the food usually becomes rancid, and often putrefactive. Nothing is better than pure beechwood tar creosote dissolved in water. He usually adds 10 to 16 drops of creosote to a pint of soft water; shake the bottle well to hasten solution, when the patient must take one or two fluid ounces before, after, and between meals. This, in the outset, arrests, or even prevents, the disagreeable changes taking place in the food while in the stomach.

In the *diarrhœa* of infants and adults alike. He has used creosote fifty years with, in the main, satisfactory results. In the diarrhœa of typhoid fever, it gives good results; at times, it has done wonderfully well in very severe cases. He prefers the watered solution; its therapeutic effects have been better obtained administered in this way. It may be emulsified with mucilage of gum acacia, and some pleasant correctives are added—*e. g.*, aromatic preparations of licorice.

He has cured some trying cases of *chronic gastritis* with creosote and bismuth subnitrate. Usually 10 or 15 drops of pure beechwood creosote, and 120 grains of bismuth subnitrate are rubbed together with mucilage of gum acacia, 4 fl. ounces. Dose, a tablespoonful every two hours.

In the *vomiting of cholera infantum*, you will find this frequently very serviceable and successful. The dose may be at first a few drops; then half a teaspoonful or more repeat-

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ed at short intervals; then farther apart. He is partial to creosote and oil of eucalyptus, equal parts; dose, 10 drops every two hours, or even 20 minims. The combination is often a marked sedative—allaying restlessness and lowering temperature—the action, in all probability, being on ptomaines fully as much as on the present germs.

An excellent tonic and antiseptic prescription in *atonic gastric disease and follicular catarrh of the mucous membrane* is creosote, 20 minims; compound tincture gentian, ℥ij. Mix. Sig. Teaspoonful every four hours in water and glycerine. This has done excellent service for some patients suffering from a follicular catarrh of the duodenum. In many cases, add a pill of bismuth gr. iij., hyocyamus gr. j.; to be taken at night; often two of these are taken at bed-time. But the good service the creosote rendered is appreciated when it is suspended for a while.

In *tubercular consumption*, creosote is indispensable in many cases, especially that form where the small bronchi are involved. Take creosote, min. 30; eucalyptus oil, min. 20; mucilage gum acacia, 4 ounces; tinct. cardam. comp., 1 ounce. Mix. S. Teaspoonful every four or six hours. He has had fine results from using creosote with the steam atomizer in this disease. Take beechwood creosote, 30 parts; eucalyptus, 20 parts; turpentine, 10 parts; iodoform, 1 part; ether, 6 parts. Dissolve the iodoform in ether; then add the other ingredients to 500 parts alcohol; then the etherial solution; shake well together. This is a fine inhalant. Add 1 or 2 drachms to the 4 ounces, and use with the steam atomizer two or three times a day. He has improvised a good chamber for using this inhalation in. First, prepare five screens six feet long and four and one-half feet wide; four of them are formed into a square and held together by loops and eyes. One of these screens is used as a door to let in and out the occupant, and the fifth one is placed over head to form a cover. These screens are covered with cotton cloth, and over the cloth is pasted newspapers. This makes the screens light and tight, so that the vapor of the medicament may be retained within the enclosure, and the patient have all the opportunity of breathing into the lungs an atmosphere charged with the medication. A small tub is placed within the enclosure for the atomizer to stand upon, and a chair for the person to sit upon. Everything being ready, the lamp is lit; in a few minutes, the atomizer is in full blast, and the treatment begins. Each seance may last fifteen or twenty minutes; some continue it thirty min-

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utes, claiming to receive greater benefit from the lengthened sitting, but twice a day is as often as most patients require. In a few days the cough and expectoration are modified, and some make rapid improvement. He knows several cases which have recovered under this treatment.

As a general thing, he is partial to a mixture of two parts creosote and one of oil eucalyptus globulus; he uses these internally and by inhalation. The dose by the stomach is at first 2 drops; then slowly increase to 5 or 6 drops, and repeat every six or eight hours. Of late, he uses refined cotton-seed oil as the menstruum, with very satisfactory results; in fact, this oil is easily digested, and is a very good nutrient when so administered—apparently as good as cod-liver oil, without the drawback on the digestion, which this latter oil so frequently entails.

Creosote has been used successfully in the treatment of *diabetes mellitus*. The daily dose was between 4 and 5 min. Good results have been reported in Germany and France.

A good and pleasant prescription for internal administration is: Take creosote min., 20; whiskey, 10 ounces; glycerine, 2 ounces; oil of eucalyptus, ½ dr. Mix. Sig. A tablespoonful after eating, and occasionally before meals.

He has used creosote with good results in *chronic bronchitis*. The best results are obtained when it is combined with oil of eucalyptus. Medicaments may be dissolved in whiskey and refined cotton-seed oil, equal parts, thus: Take creosote, oil of eucalyptus, of each, ½ dr.; whiskey, refined cotton-seed oil, of each, 6 ounces. Mix. Sig. Tablespoonful after eating.

Nearly all the beechwood creosote on the market is adulterated with carbolic acid. Many physicians prescribe the German creosote sold under the name of coal-tar creosote, under the impression that it is as good as beechwood creosote for the uses creosote is usually put to. Test the creosote before purchasing any quantity.

Reunion of Cut Off Tongue.

Dr. N. C. Davis of Good Thunder, Minn., in September, 1884, was summoned to see a boy seven years of age who had been kicked by a horse on the right cheek, breaking off the first bicuspid tooth. The tongue was cut entirely off at the junction of the tip with the base, or the posterior portion of the *frænum linguæ*, with the exception of a few fibres of the tongue and mucous membrane on the right side. When Dr. Davis arrived, the end of the tongue was

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protruding from the mouth. The hæmorrhage was controlled by a dilute solution of persulphate of iron. He sent for Dr. J. W. Andrews to assist him. In about an hour he arrived and administered chloroform. Dr. Davis drew the base of the tongue forward with a tenaculum. Then the apex was brought into apposition with the base, and secured by five silk ligatures above on the dorsum, and seven below. The boy stood the operation well, and the hæmorrhage was trivial. The balance of the treatment consisted in syringing out the mouth twice daily with a solution of boracic acid and putting patient upon a liquid diet. The tongue healed nicely, with the exception of a small portion on the left side, which sloughed out and left a small notch, which was nearly replaced by granulation. The Doctor discharged the patient in about three weeks with the tongue full length and articulation good.—*Northwestern Med. Jour.*, June, 1890.

Some Fallacies Concerning Syphilis.

Dr. E. L. Keyes, in a recent number of "The Physicians' Leisure Library," has thrown together the following thirteen fallacies, which he has found to be entertained, to a greater or less extent, by the profession or the public, for the purpose of correcting them:

1. Syphilis is necessarily a severe disorder, disfiguring its possessor, entailing social ostracism, destroying the domestic life of its victim, and impressing its stamp upon his issue from generation to generation.

2. There are essential differences in the quality of the syphilis poison—in other words, there is a mild and a virulent syphilis, *per se*.

3. A local sore appearing upon the penis after sexual exposure, necessarily means that a poisoning of some sort has been experienced, while a recurrence of sores upon the penis without further exposure is proof positive of syphilis.

4. Syphilis is at first a local disorder, capable of modification by local treatment.

5. Syphilis is acquired only during sexual contact, and is contagious only through that channel.

6. A person with syphilis is so poisoned that he may communicate the malady by any contact of his body with that of another.

7. Mercury is an evil only less serious than syphilis itself, and to be accepted in the treatment of syphilis on the same ground that one would advocate jumping from a high window in order to escape from a burning building.

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8. Mercury, when used by the method called "the tonic treatment," effects a cure by virtue of its tonic action.

9. Mercury cures syphilis.

10. The iodides are less harmful, and as effective, in the treatment of syphilis, as mercury.

11. The treatment of syphilis consists only in the use of mercury and the iodides.

12. Syphilis in the parent often shows itself as scrofula in the children.

13. The Hot Springs of Arkansas have some specific effect in modifying the syphilitic poison, curing the disease, or at least shortening its duration.

[Remember that the above are *fallacies*—not propositions. *Editor.*]

Dosage and Administration of Creosote [Beechwood] in Phthisis.

If we devote so much space in this issue to the consideration of creosote in phthisis, it is because several experiences of the Editor have convinced him of its special value, and because, from his conversations and correspondences with Southern and Southwestern doctors in particular, it does not appear that this agent has ever yet been generally tried—notwithstanding the very excellent article on the subject by Dr. William Perry Watson, of Jersey City, in the October No., 1889, of the *Virginia Medical Monthly.*

Dr. Wm. H. Flint, of New York, N. Y., in a paper read before the New York Clinical Society, May 23rd, 1890 [published in the *New York Medical Journal*, July 26], says that convincing proofs of the efficacy of this remedy have been furnished by many authors. The papers of Dr. Beverley Robinson deserve particular mention. But in view of divergent opinions regarding the dosage and administration, the writer considers a discussion regarding the quantity of the drug to be employed, and the best methods of its exhibition, as opportune.

Bouchard and Gimbert (to whom belongs the credit of rescuing the creosote treatment of phthisis from oblivion after its discovery by Reichenbach, early in the nineteenth century,) suggested (in 1879) six or seven drops as the average daily dose, to be increased if easily tolerated. Their favorite formula was—

℞. Creosote..... ..... m xxxj;
Tincture of gentian..... m lxxij;
Alcohol..... ..... ℥ x;
Tokay or Malaga wine..... ℥ v.

Dose, from ℥ j to ℥ ss.

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Dr. Beverley Robinson (1878) at first used the creosote mixture (U. S. P.) in dessertspoonful doses. This is composed of creosote and glacial acetic acid, each, ♏ xvj; spirit of juniper, fl. ʒ ss.; syrup, fl. ʒ j; distilled water, fl. ʒ xv. Each ounce contains one minim of creosote.

In 1886, Dr. Robinson adopted antiseptic inhalations in his treatment of phthisis, using, by preference, a mixture of equal parts of creosote and alcohol, or of creosote, alcohol, and chloroform. In 1889, he again described his method, recommending the inhaler now known by his name, and three solutions well adapted for use in it. Their composition is—

1. Recommended by Brunton, modified by Robinson:

℞. Iodoform ..... gr. xxiv;
Creosote ..... ♏ iv;
Oil of eucalyptus ..... ♏ viij;
Chloroform ..... ♏ xlviij;
Alcohol, Ether, } ..... āā q. s. ad. fl. ʒ ss. M.

2. Formula of Dr. Coghill:

℞. Tr. iodi ætherealis, Acid carbolici, } ..... āā. ʒ ij;
Creosot ..... ʒ j;
Spts. vin. rect ..... ad. ʒ j. M.

3. Dr. Robinson's own prescription:

℞. Creosote ..... ʒ j;
Alcohol ..... ad ʒ ss.

The inhaler was worn at first for 15 or 20 minutes every three hours, and from 10 to 20 drops of the mixture were placed upon the sponge at least three times in twenty-four hours.

For internal administration, Dr. Robinson employed the following formula, which is adapted from Jaccoud:

℞. Creosoti ..... ♏ vj;
Glycerini ..... ʒ j;
Spts. frumenti ..... ʒ ij. M.

The dose generally was one teaspoonful every three hours, diluted with two parts of water to prevent irritation of the throat and stomach. Dr. Robinson contended that creosote should be begun in moderate doses, continued a long time, and increased gradually. His average daily dose was from three to six minims, and this quantity he administered for many months.

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Dr. Austin Flint used three or four drops thrice daily, and inhalations of the creosote, chloroform, and alcohol solution, already described, at first for a few minutes, three times a day, and then increasing up to four or eight hours a day.

Prof. Sommerbrodt, of Breslau, strongly advocates heroic doses, upon the assumption that enough creesote may be given to so charge the blood with the remedy as to antagonize the development of tubercle bacilli. He bases his method upon the researches of Dr. P. Guttman, who showed that tubercle bacilli could hardly be cultivated in sterilized serum containing $\frac{1}{4000}$ volume of creosote, and that the culture could not be carried on if the solution were a little stronger than 1 in 4,000. He tested his method in hundreds of cases, using capsules, each containing one minim of creosote. Begin with three capsules the first day, and add one each succeeding day until the eighteenth day, after which the maximum quantity, from 20 to 25 minims *per diem*, is administered for many months. His success in any given case was in direct ratio with the amount of creosote taken. One patient took nearly 9 ounces of creosote and 35 ounces of Peruvian balsam in 9 months, with very good results.

Dr. P. Bogdanovitch, in his own case of pulmonary and laryngeal phthisis, for two years took half a grain, four or five times daily, without effect. He then commenced with four grains daily, and increased the quantity within two months to *forty-four grains* in twenty-four hours. The results were speedy amelioration of the cough and dyspnœa, diminution of sputum, and disappearance of fever and laryngeal spasm. The bacilli remained just as numerous as at the beginning of the treatment. He infers that five grains should be taken four times a day, in capsules, after food.

This heroic Russian method would hardly be adapted to the average invalid's stomach in these latitudes. Even Dr. Bogdanovitch experienced epigastric discomfort after taking small doses on an empty stomach. This symptom did not occur when even twelve grains were taken *after* meals. If, however, twelve grains were taken at a single dose, or twenty grains within an hour, Dr. B. suffered from giddiness, cardiac palpitation, weak pulse, asthenia, pallor, and anxiety. All of these toxic symptoms disappeared within an hour, and did not return.

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Dr. Lanisniée claimed that nausea and vomiting from creosote might be avoided by the following formula,

℞. Creosote..... 5 centigrammes;
Balsam of Peru..... 7½ centigrammes;
Norway pitch..... 7½ centigrammes;

M. Make one capsule. S. Take four capsules with the meals, morning and evening, and gradually increase to twelve daily.

Dr. Rosenbusch injected eight minims of a three per cent. solution of creosote in almond oil into two spots in the diseased lung at intervals of two or three days. The points were either the second intercostal space or the supra-spinous fossæ. The only unpleasant symptom was pleuritic pain, when the injections were too near the pleural surface. No hæmorrhages occurred after the injections, but the sputum of one patient, who had already suffered from hæmoptysis, was slightly colored for a short time. Other observers have not attained the good results alleged for intra-pulmonary injections of creosote.

Dr. T. Stachiewicz carefully employed Rosenbusch's method. Cough and expectoration notably increased after each injection. He concludes that, if cavities have formed, creosote injections may cause rapid destruction of pulmonary tissue by engendering inflammation. He also believes that hæmoptysis is likely to follow intra-pulmonary injections.

Dr. Mackey used intra-pulmonary injections of a three per cent. solution of creosote in olive oil. The seventh injection, however, caused hæmoptysis and increased the inflammatory symptoms so that the treatment was abandoned.

Dr. J. Rosenthal advocated carbonic acid water as a menstrum for creosote—based upon experiments as to the effect of solutions of creosote in carbonated water upon cultures of micro-organisms. Rosenthal found that their growth was arrested by carbonic acid water containing 1 part in 2,000 of creosote Other experiments showed that creosote, even in weak solutions, will not only hinder the growth of the micro-organisms, but will actually kill the latter. They also demonstrated that a sufficient quantity of creosoted water can be given hypodermically to a rabbit to make a dilution of one to four thousand in its blood without causing appreciable morbid symptoms. Creosote solutions of this strength were shown by Koch to greatly retard the

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growth of tubercle bacilli in various culture media. Rosenthal recommended that the carbonated creosote water be of such strength that each litre should contain from 0·6 to 1·2 of creosote and 30 grammes of cognac. The doses of this solution are so arranged that 0·1 of creosote is taken on the first day, and the remedy gradually increased until the daily dose is 0·8.

Von Driver used creosote mixed with alcohol and sherry wine, according to the formula of Frantzel, as follows:

℞. Creosoti. ..... ♏ xv;
Tr. gent..... m vj;
Spts. vin. rect..... fl ʒ vj;
Vini xerici. ..... q. s. ad. fl ʒ iv. M.

Sig. ʒ ss. t. i. d., with water.

He believed in the heroic method, and increased his doses as rapidly as possible until the maximum was reached (*i. e.*, 11¼ grs.).

Groh administered creosote in wafers intimately mixed with powdered cacao.

Dr. Jas. E. Newcomb reported favorably concerning creosote at Roosevelt Out-patient Department. He administered the creosote by mouth only.

℞. Creosoti, } ..... āā ʒ ij–ʒ iij;
Tr. capsici, }
Mucilag. acac..... ..... ʒ ss.;
Aquæ..... ad. ʒ iv.

M. Sig. ʒj, well diluted with water, after meals.

Dr. Ruetimeyer uses creosote in emulsion, with olive, almond, or cod liver oil, in which form it is fairly palatable, and causes hardly any indigestion.

Dr. Dor advocates intra-tracheal injections of sterilized olive oil, containing creosote in the proportion of one part of creosote to twenty of oil, continued for many months. Inject 31 minims of this mixture, containing 3·1 grains of creosote, twice daily; he never observed untoward results—such as hæmoptysis, fever, or pleuritic pain—to follow the injections. After the injections, the patients are made to assume positions adapted to facilitate the gravitation of the creosote to the diseased part of the lung. The fact of its penetration is evidenced by the production of sub-crepitant râles. The digestive disturbances often resulting from the internal administration of creosote were entirely absent in his cases. His experiments with animals showed that the oil reached the alveoli, and remained there for fifteen days in some cases before undergoing complete absorption.

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The *writer's* experience with creosote in phthisis embraces seventy-three cases, among which there have been examples of all stages of the disease. The cases were divided into three classes, according to the methods of treatment adopted—

1. Those in which creosote inhalations were alone employed.
2. Those in which creosote was administered both by inhalation and by the stomach or the rectum.
3. Those in which the drug was given only by the stomach or the rectum.

So far as the limited experience of the writer goes, it tends to show that neither of these methods *invariably* furnishes the best results. The inhalation method was, naturally, most successful for patients whose gastro-intestinal tracts were diseased, while the other methods were more satisfactory, producing more immediate, and even phenomenal results in cases whose digestive organs were in a fairly healthy condition.

The inhalation solution was equal parts of creosote, alcohol, and chloroform. It was very acceptable to patients, save in a few in which it caused nausea and gastric distress whenever employed. The inhalers used were Dr. Robinson's and that of the Brompton Hospital. In mild cases, the inhalations were administered for fifteen minutes, every two or three hours; in severe ones, every hour during the daytime and every three hours at night. From ten to fifteen drops of the solution were placed upon the sponge about every five hours during the day and twice during the night. The writer at first relied upon Jaccoud's solution, composed of creosote, m vj; glycerin, ℥j; and whiskey, ℥ij. This was well borne by strong stomachs, but the dose could not be greatly increased without an undesirably large amount of glycerin and whiskey. The former in large quantifies perhaps engendered gastric distress quite as much as the creosote, and produced too free peristole of the stomach. Whiskey, in the early stages, seemed contra-indicated when there was little need of stimulants, and also exposed patients to the risk of contracting an undue fondness for alcohol. Hence the writer early adopted an emulsion composed of cod liver oil, 40 parts, and mucilage of acacia, 60 parts—each drachm containing two minims of creosote. This was generally better tolerated than the glycerine and whiskey, particularly when given after food. In suitable cases, the emulsion was given every two hours, and the dose increased

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up to the point of toleration, which, in the majority of the cases, was about ten or twelve minims *per diem*.

In many instances, when patients could be persuaded to temporarily adopt an exclusively milk diet, the creosote emulsion was administered in milk, thoroughly mixed by means of energetic shaking. He administered more creosote in this manner without exciting gastric symptoms than by any other method. In a few cases, twenty-four minims of creosote were daily given in this way for several consecutive days before the growing gastric distress necessitated a diminution of the dose. Some patients do not object to the flavor, and some mix the creosote with only a part of the milk to be taken, reserving the remainder of the milk for the final swallows. In this way the after-taste is greatly diminished, and it may be quite removed by any good mouth wash.

Rectal injections of milk containing the creosote emulsion, and which the writer has not seen referred to in medical literature, have also proved very valuable in his experience. This channel for the introduction of creosote may be advantageously employed when the stomach or the palate rebels against administration of the remedy *per orem*. One or two drachms of the emulsion, containing, respectively, two and four minims of creasote, may be shaken up with four ounces of milk, and such an enema may be given every five or six hours. When the rectum becomes intolerant of this treatment, a small amount of laudanum may be added to the enema to obtund the sensibility of the bowel, and from two to four drachms of whiskey may be added where stimulation is indicated.

Another mode of administration which promises much, but which awaits development, is by means of keratin-coated or other so-called enteric pills. The writer has been thus far disappointed in his efforts at securing pills which would not dissolve in the stomach. The solubility in the gastric juice of those keratin-coated pills which he has employed was proved by eructations of creosote and by the rapid development of gastric irritability. It is, however, quite reasonable to suppose that the pharmacist's art will eventually provide pills or capsules which will resist the action of the gastric juice and liberate the creosote in the intestinal canal, being dissolved by the pancreatic juice and the bile. This part of the digestive tract may thus be made to absorb the creosote when the stomach or the rectum is incapable of its appropriation.

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The conclusions reached by the writer, are:

1. Intrapulmonary and intratracheal injections of creosote are of doubtful utility, and may be positively injurious.

2. For administration by mouth or rectum, solutions and emulsions of creosote are preferable in most cases to capsules, pills, or wafers.

3. Milk is an excellent vehicle for the administration of creosote in solution or in emulsion.

4. Each method of administering creosote, viz., by inhalation, by mouth or rectum alone, and by both these channels simultaneously—is useful, and may be partially adapted to individual cases. In suitable cases the most rapid progress seems to be made when all these ports of entry are utilized.

5. The best results for each individual attend the administration of the maximum quantity of creosote which this patient will bear.

6. The average patient will not easily tolerate more than ten or fifteen minims of creosote *per diem* for any great length of time, and many will bear only two or three drops *per diem* continuously administered.

7. It is very important that the treatment be uniform and uninterrupted.

8. Consequently, an effort should always be made, if intolerance of creosote is shown by any one mucous surface, to employ some other channel of introduction, in order that the continuity of the treatment be not interrupted.

Dr. Beverley Robinson said he believed in creosote as a very useful remedy in this disease. After reading Bouchard's paper he commenced using creosote; but in the beginning he had only had faith in it as a good anticatarrhal agent. Creosote must be given in small doses and continued a long time. Some patients might bear large doses well, but it was always a risk to insist upon them. He had always used creosote by the mouth or inhalation, and had had no experience with the method of giving it by the rectum. He was not favorably disposed towards this other way of giving the drug. Creosote should be pure, well diluted, and perfectly dissolved, in order to prevent any possible danger of stomachal intolerance. The dose of a half to a minim should be given five or six times in twenty-four hours, and increased in amount very slowly. It should be continued for months at a time, and indeed so long as there was any indication for its use. Taken in this way it would

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usually produce good, and at times, remarkedly good effects. Sputa would diminish and disappear, nutrition was benefited, strength increased, and cough arrested. The local signs were sometimes much improved. He had known, in at least two cases, the bacilli to disappear entirely from the sputa, where they had previously been recognized. In several cases he believed he had seen patients recover. Altogether, in his judgment, creosote was the best remedy we now were in possession of for the amelioration and possible cure of pulmonary phthisis. We must not, however, run risks of disgusting our patients with it by increasing the doses too rapidly. Above everything we must preserve the digestive organs intact, and must not interfere with the assimilative process. If we do this, we lose immediately all the possible good effects from creosote, and take away from the patient one of his reliable chances of living. Whenever it could be carried out, he liked the combined effort best—of inhalation and administration by the stomach.

Dr. W. H. Katzenbach remarked that, for the last year or so, he had employed creosote in the treatment of phthisis in private practice, and with results corresponding with those mentioned by Dr. Flint and Dr. Robinson. Under its administration, in a good proportion of cases, appetite and digestion had improved, cough and expectoration had subsided, fever abated, nutrition increased, and the patient gained in weight. A woman, aged twenty-three years, consulted him early in March with signs of phthisis in the second stage, involving a considerable portion of the upper lobe of the right lung anteriorily. Her temperature was 100.5° F., pulse 120, and respiration 32; weight, one hundred and seven pounds. She was given creosote in conjunction with cod-liver oil and extract of malt. By the middle of March her appetite had improved and cough had diminished. Menstruation reappeared, and she felt stronger in every respect. By the latter part of April her temperature was 98.5° F., pulse 80, and respirations 24. The respiration over the affected lung was still broncho-vesicular, but the râles had disappeared. Her weight was one-hundred and eleven pounds and five eighths. In medicinal doses, Headland had said that creosote had "a double action, being anodyne, like hydrocyanic acid, and a mucous stimulant, like turpentine." When begun, creosote might increase cough and expectoration from its liquefying action on the sputa, but subsequently secretion diminished or was arrested, and cough was relieved. In the late stages of

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phthisis, with cavities, high fever, copious expectoration, loss of appetite, and impaired digestion, the results had not been favorable. The following formula was the one commonly used:

℞—Creosoti (beechwood)..... .....3j;
Glycerin..... ..... ad ℥iij.

M. Sig.—Take a half teaspoonful after meals and at bedtime, with whiskey, a half to a teaspoonful, and water two ounces.

Dr. W. G. Thompson wished to add his testimony to the value of the results of the creosote treatment in many of Dr. Flint's cases of phthisis. He had used the drug extensively for years, and was convinced that it was, upon the whole, the most useful remedy that we possess for controlling many of the more urgent symptoms of phthisis, notably diminishing cough, expectoration, and dyspnœa, and favoring gain in nutrition. In cases fairly advanced, he believed in pushing the administration of the drug to the limit of toleration. This limit was considerably extended by taking great pains to secure a pure wood creosote, and to administer it in the careful manner described by Dr. Flint. When the stomach shows signs of irritation from large doses of creasote, he had found it to be still very well borne when administered by the rectum in five-minim doses, in emulsion, or by inhalation. If the inhalers worn were not deep enough, excoriation might result. The speaker thought that we were still completely in doubt as to the mode of action of the drug in phthisis. In man there were fourteen pounds of blood, in which any so-called "antiseptic" remedy must inevitably be diluted when absorbed, and it was easier for him to believe that creosote might act by altering in some manner the tissues or "soil" in which the tubercle bacilli grew, or by improving bodily nutrition, than to admit that its influence was in any way germicidal, even when inhaled. In the latter case, it was difficult to prove how deeply it diffused into the lungs, or that it ever came in direct contact with many foci of bacilli.

Buffalo Lithia Water Dissolves a Stone in the Bladder.

In the December No., 1889, of *Virginia Medical Monthly*, Dr. John Herbert Claiborne reported a most remarkable case, illustrating the wonderful solvent properties of Buffalo Lithia Water in the treatment of renal and bladder calculi. But in the July No., 1890, of the *New England Medi-*

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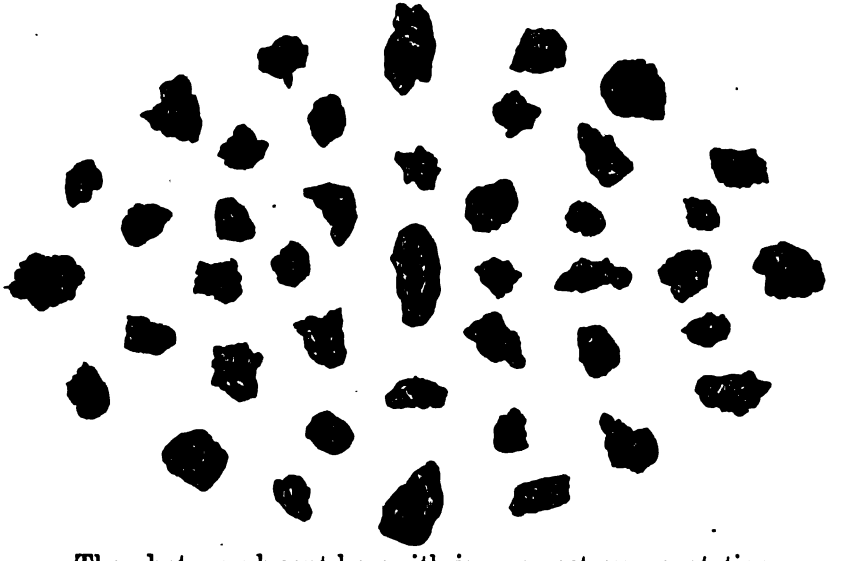
cal Monthly, we find report of even a more remarkable case by Dr. C. H. S. Davis, of Meriden, Conn., which is so strikingly illustrative of the value of this Virginia Springs water that we publish it entire. This case, occurring under the care of one of New England's most eminent physicians, adds confirmation to opinions and records given by such eminent practitioners as Drs. Hunter McGuire, James L. Cabell, H. M. Wilson, etc. Dr. Davis says:

Mr. R. L. Roys, of this city, consulted me about two years ago for stone in the bladder, from which he had been suffering for a number of years. On my suggestion, he commenced the use of the Buffalo Lithia Water, as he was very much opposed to operative interference. After using the water for a short time, disintegration, to a certain extent, took place, and large quantities of stone were passed. For several days in succession, he passed as much as a teaspoonful of the debris, and at intervals, for a considerable period, he passed large quantities, and, under the continued use of the water, there was a constant passage of calculi until he was entirely relieved of his trouble.



The photograph sent herewith is a correct representation, and exact size, of some of the largest specimens of calculi discharged by Mr. Roys. A chemical and microscopical analysis showed that they are uric acid, with a trace of the oxalate of lime.

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Proceedings of Societies, Boards, etc

[By oversight of compositor, the following Reports of N. C. Board of Medical Examiners etc., was omitted from their proper position. Hence the reduplication of the same Departments of Proceedings of Societies, Boards, etc., in this issue.]

BOARD OF MEDICAL EXAMINERS OF NORTH CAROLINA.

We condense the following report of the Annual Session of the Board of Medical Examiners of North Carolina, held in Oxford May 24th–29th, 1890, from advance sheets of the *North Carolina Medical Journal.* This Board is composed of seven practitioners, elected by the Medical Society of North Carolina, and each of the seven has to conduct the examinations of candidates in some one of the seven grand divisions of medical science. Thus the President, Dr. Wm. R. Wood, is Examiner in Chemistry; the Secretary, Dr. W. J. H. Bellamy, of Wilmington, was Examiner on Materia Medica, etc.; Dr. A. W. Knox, on Obstetrics; Dr. F. Duffy, on Surgery; Dr. Willis Alston, on Practice of Medicine, etc.; Dr. P. L. Murphy, on Anatomy; and J. A. Reagan, on Physiology.

On motion, Drs. Duffy and Knox were appointed a committee to consult the Attorney-General in regard to those physicians, qualified to do so, who failed to register on or before January 1st, 1890; and also concerning those who registered as having been in practice prior to March 7th, 1885, but have never received a license from the Board, and who are now known to have been guilty of grossly immoral conduct; and, further, to ask the question: "Can this Board annul the registration certificate, and take away the privilege of such men from practicing in this State?"

The Attorney-General, Hon. T. F. Davidson, under date of May 28th, thinks that "a sensible and practical construction of the law will confer upon the Board sound discretion in the matter," as to the examination of those who failed to qualify before January 1st. He is, moreover, "inclined to the opinion that the power to revoke license" is confined to those cases where the Board has granted the licenses.

Temporary licenses had been issued since the examination of 1889 to 20 practitioners; but of these only 7 stood satisfactory examinations during the annual session. Hence the temporary licenses had to be withdrawn from 13.

Of the total 72 applicants for license upon examination, only 46 were successful.

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Below will be found some interesting statements, which have been tabulated for easy reference, showing some of the work of the Board from 1885 to 1890—both years included:

Names of Colleges.	Graduates Licensed.	Graduates Rejected	Non-Graduates Licensed.	Non-Graduates Rejected.
University New York	25	.....	1	2
" Pennsylvania	3	.....	2	.....
" Maryland	71	11	3	6
" Virginia	12	.....	4	2
" Vanderbilt	4	8	.....	1
" South Carolina	.....	.....	.....	1
" Louisiana	2	.....	.....	.....
" Tulane, Louisiana	1	.....	.....	.....
" Louisville	3	3	.....	.....
" Michigan	1	.....	.....	.....
" Georgia	1	1	.....	.....
Bellevue Medical College	17	3	1	3
Atlanta Medical College	3	4	1	.....
Medical College of Virginia	3	.....	2	1
Charleston Medical College	.....	1	.....	.....
Louisville Medical College	14	8	1	4
Baltimore Medical College	3	4	1	.....
College of Physicians & Surgeons, Baltimore	64	21	7	14
College of Physicians & Surgeons, N. Y	3	.....	.....	1
Kentucky School of Medicine	5	2	.....	.....
Leonard School of Medicine	11	2	.....	3
Jefferson Medical College	35	2	5	3
Southern Medical College, Atlanta	2	2	.....	.....
Medical College of South Carolina	5	.....	1	1
Long Island Medical College	3	.....	.....	.....
Woman's Medical College, Philadelphia	1	.....	.....	.....
Nashville Medical College	.....	.....	1	.....
Baltimore University School of Medicine	1	1	.....	.....
Medico Chirurgical College, Philadelphia	1	2	.....	.....
No College at all	.....	.....	1	4
Western Reserve University, Cleveland, O	1	.....	.....	.....
Eclectic Medical College, Atlanta	.....	1	.....	.....
Howard University, Washington	.....	1	.....	.....
N. Y. Homœopathic H. Medical College	1	.....	.....	.....

1885	84	Licensed.	17	Refused,
1886	46	"	15	"
1887	84	"	14	"
1888	36	"	17	"
1889	46	"	17	"
1890	46	"	26	"
Totals	292	Licensed.	106	Rejected.

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ACADEMY OF MEDICINE AND SURGERY.

[J. W. HENSON, M. D., Reporter.]

RICHMOND, VA., July 8th, 1890.

Dr. Wm. W. Parker, President, in the Chair.

Rickets with Delayed Power of Speech in a Child Three-and-a-Half Years of Age.

Dr. J. N. Upshur reported the case of a child unable to walk or talk at the age of three-and-a-half years, although apparently perfectly developed physically, and, to a casual observer, as bright mentally as any child.

The expression of its face was a little more childish than the age demanded. There was a remarkable suppleness about the hip-joints, the child being able to abduct the lower limbs until at right angles with the trunk, or flex them until flat upon the abdomen. The child possessed a good appetite, was perfectly well nourished, though constipated, and had well-resisted two or three severe spells of illness. It had a remarkable appreciation of musical sounds. The teeth were irregular in their eruption—appearing here and there at haphazard around the dental arch. The doctor knew of no cause for the state of affairs, except that the mother, when pregnant, was subjected to considerable mental and physical worry. He asked, was the condition the result of lack of nervous power, and would benefit accrue from the use of electricity and massage? There had been no convulsions, and all the pelvic bones normal.

Dr. J. Michaux thought the case one of arrest of development from lack of brain or nervous organization, and that there was little chance for mental development under such conditions.

The President thought a child of three years would learn to talk.

Dr. George Ben Johnston believed the case, from the history, one of mild rickets, and was sure that by an active tonic treatment, in which the hypophosphites were involved, massage (particularly) electricity and strict attention to hygienic surroundings, much good could be done for the child's bones. He thought it would walk, and did not believe the inability to speak necessarily serious.

Veratrum Viride in Puerperal Convulsions.

Dr. Parker, in a case of puerperal convulsions occurring two or three weeks before the expected time of labor—besides the usual plan of venesection and chloroform—also

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gave tincture of veratrum viride 14 gtts. early, and afterwards 5 gtts. every two hours. The patient was relieved, but labor commenced two or three days later, and, under chloroform, she gave birth to a live child of 8 months' gestation, large but feeble. Dr. Parker had great faith in veratrum viride for the relief of convulsions.

Cholera Morbus Rapidly Fatal.

Dr. Parker also reported the case of Mr. V., who summoned medical aid about 2 P. M. on Wednesday; by 3 P. M. on Thursday he was dead. Before death the vomiting and purging became excessive, and a convulsive movement of the lower extremities manifested itself. The victim had been robust and perfectly healthy all of his life except an anal fistula some years ago. Dr. Parker thought the action of the vagus had been inhibited by the intense heat—the man's work keeping him much in the sun.

Chloroform versus Opium in Intestinal Inflammations.

A short time after V.'s death, his son was stricken down. After the first day or two of illness, he complained of very little pain. Dr. Parker, accepting the case only the day before death occurred, found him quiet—pulse 120, and temperature 101°. There was no pain, except upon deep pressure; it was then severe, and the abdomen was retracted—two bad features. Late the next day the boy was in collapse—death soon following.

A post-mortem examination revealed the ascending colon pushed obliquely across the abdomen by the greatly distended and inflamed small intestines, which here and there showed adhesions and exudations (some as large as a fifty cent piece) about to undergo organization. In fact, a severe general peritonitis had existed—a pint of pus being in the cavity of the peritoneum.

The doctor believed the lack of pain due to the amount of morphine given by the physician first in charge. He objected to such large doses of the drug, and mentioned, in connection, a fatal case of intestinal inflammation to which he had been called at Old Point. The physicians called in had probably administered large doses of morphine. He found the man in collapse—perfectly quiet and indifferent. No amount of stimulation or other means used produced reaction.

He believed large doses of opium would not only prevent reaction, but increase congestion. He thought the pain of these cases very largely due to spasm of the muscular layer

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of the bowel, and therefore would just as readily, and much more safely, be relieved by chloroform (by inhalation and internally), together with stimulants.

There was no debris of food in the colon, nor about the cœcum in the post-mortem case mentioned.

Dr. Upshur believed there was something back of the opium in Dr. Parker's case. The purgative action from large doses of calomel (such as 15 grs.), and the castor oil following it, would add to the irritation and congestion. The kind of congestion referred to by Dr. Parker would be aggravated by opium, but he considered the drug beneficial in passive congestions, such as occurred in the latter stages of typhoid fever.

Dr. Upshur was interested in Dr. Parker's case of puerperal convulsions, because the child was born alive. He always expected *a dead child after convulsions.*

Examination for Uræmic Symptoms During Pregnancy Imperative.—Pilocarpine in Uræmia.

Dr. Upshur believed it the *imperative* duty of every physician to make periodical examinations of the urine of pregnant women in their charge, and to enquire into the amount of water passed per day and the condition of head and vision. There might be double vision, intense headache, and scanty urine, *without* albumen, and yet convulsions. He remembered a patient who complained of severe headache two weeks before confinement, but there was no albumen in the urine, nor was there impairment of vision. During labor she was threatened with convulsions. The prompt and continued use of chloroform, however, warded off the attack. The skin was hot and dry.

Bromide of potassium and pilocarpine were administered in repeated doses until a profuse perspiration was induced, with relief of head symptoms. Examination of urine now showed 33 per cent. of albumen. The patient made a complete recovery.

He mentioned another case in which he had the same experience with pilocarpine. He knew the objection to it—that it was depressing—but why object to it and recommend veratrum viride? For the immediate relief of convulsions, he used morphia and atropia hypodermically, besides the lancet and chloroform.

Dr. Landon B. Edwards thought it a valuable injunction for the physician, advised in time of a case of pregnancy, to watch the woman as a parent would the training of a child. Though convulsions did not always follow the symp-

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toms referred to by Dr. Upshur, yet they should be accepted as warnings. A prominent pre-current symptom, pointed out years ago by Dr. Henry T. Bahnson, of Salem, N. C., and others, is the morbid appetite in the latter stages of pregnancy. As to treatment, first quiet the alarm of the patient, and then direct attention to the kidneys. He also highly recommended pilocarpine, if the patient was strong enough to cough up or call attention to the accumulation that would occur in the bronchial tubes. If a convulsion occurred, she might drown, if the bronchorrhœal action of the pilocarpine was too great.

Erratic Pain in Labor.

Dr. Johnston had been called, 15 or 20 days before expected delivery, to a woman, the mother of four children (good labor each time), who complained of a severe pain, paroxysmal in character, occurring on the right side of the neck, and extending down upon her chest to the margin of the axilla. Suspecting the approach of labor, he asked for an examination, but was refused. Early the next morning he was called again, and found the child born. The pains had increased in length and intensity, the intervals growing shorter, until there was suddenly a gush of waters, the birth of the child immediately following. The woman had not a single uterine or abdominal pain, and did not, in the least, suspect the real condition of affairs.

Scirrhus of Rectum in a Child Aged Thirteen Years.

Dr. Jacob Michaux had been treating a child of 13 years for ulcerated rectum for some time with no benefit. He made an examination of the parts with the patient under chloroform. About 2 inches above the anus he found a band of 2½ inches in width nearly closing the calibre of the bowel. It was hard to the touch, but tore upon pressing the finger through it. There was some inguinal enlargement. Every motion of the bowels caused acute violent pain, and this examination induced so much as to necessitate the use of opiates. The pain was not notably worse at night than in the day. The general appearance of the boy suggested malignancy, and the doctor believed it such, though he had never seen a case in so young a subject. There was a slight discharge of mucus and pus, probably from inflammation around the growth. There was no history of chronic constipation, nor of syphilis, nor of dysentery, except such as was due to the present trouble.

Dr. Upshur, refusing to believe in malignancy at that age,

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thought Dr. Michaux would find that some previous proctitis had produced the band of lymph present, or that there was some history of syphilis back of the trouble. He had seen such a case in a woman of decided syphilitic history—there being acute pain upon defecation. He performed repeated cuttings and dilatations. Her health ultimately gave out—death following.

He would suggest alteratives and nutritious, but fluid diet. The rectum might be washed out with warm water and boracic acid. The pain could be relieved by suppositories medicated with cocaine, or enemata of glycerine and cocaine.

Dr. Jno. R. Wheat thought that Dr. Michaux would do well to look after a probable syphilitic history. He related two cases in which a constitutional treatment, involving potassium iodide, particularly gave decided relief. Though the trouble returned, this treatment relieved each time. He had no faith in operative measures in such cases; had tested that plan.

Dr. Michaux said the child's grandfather died of cancer.

[Since the above meeting, Dr. Upshur found—upon stripping the little girl of 3½ years, whose condition he reported—that there was a uniform atrophy of the muscular system. He has given her the benefit of massage and electricity for ten days. Improvement has manifested itself by the more ruddy appearance generally, and toning up of the muscles.]

Book Notices.

International Atlas of Rare Skin Diseases. Editors: MALCOLM MORRIS, London; L. A. DUHRING, Philadelphia; P. G. UNNA, Hamburg; H. LELOIR, Lille. Leopold Voss, Hamburg and Leipzig, Publisher.

We have received Nos. I and II of this *International Atlas of Rare Skin Diseases*, through the Publishing House of the J. B. Lippincott Co., of Philadelphia, giving magnificently executed quarto size plates of cases of Lymphangioma circumscriptum, Ulerythema acneiforme, Lupus semisclerosus, linguæ, Sarcoma pigmentosum diffusum multiplex, Keratodermia symmetrica erythematosa, Angiokeratoma, and Ulcus molle mammæ. The pages are royal quarto in size, and the full clinical record of each of the seven cases is given in three languages—German, French, and English—each a literal translation of the other. Each number con-

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tains about 20 pages of text, and 4 to 6 plates. To every dermatologist and syphilographer, at least, this *Atlas* must prove invaluable, as it takes the place of no published text-book on the subject, but supplements every one of them. We regret that we did not receive a Prospectus, giving American rates, etc.; but all such information may be obtained by writing to the American publishers in Philadelphia, Pa., the J. B. Lippincott Co. H. K. Lewis, 136 Gower street W. C., London, is the English publisher; and G. Masson, 120 Boulevard Saint-Germain, Paris, is the French publisher. No. I was issued October, 1889; No. II in March, 1890. Until greater demand occurs, only two or three parts will be published yearly. The price in Germany is 20 marks a year ($5).

Etudes de Clinique Infantile. Par le DR. SEVESTRE, Mèdicin de l'Hospice des Enfants-Assistes. Paris. E. Lecrosnier & Babe, Editeurs. Bureaux du Progres Medical, 14 Rue des Carmes, 14. 1890. Paper. 8vo. Pp. 143. Price 60 cents, plus postage.

These studies of clinics for children are very serviceable to every practitioner. The first 88 pages are devoted to the early manifestation of congenital syphilis, considered especially from a diagnostic point of view. The next 21 pages treat of the laryngeal signs and symptoms diagnostic of early marked hereditary syphilis. Then follows a chapter of 13 pages on a form of infectious broncho-pneumonia of of intestinal origin, as indicated by the coincident diarrhœa, etc. The concluding 18 pages are taken up with the important subject of prophylaxis against measles and diphtheria at the Hospice des Enfants-Assistes.

Etude Anthropometrique sur les Prostituees et les Voleuses Par le DOCTEUR PAULINE TARNOWSKY. (*Anthropometric Study of Prostitutes and Female Thieves.*) With 8 Anthropometric Tables and 20 Figures. Paris. 1889. E. Lecrosnier & Babe, Publishers. Place de l'Ecole de Medicine. Paper. 8vo. Pp. 226. Price $1.20 includ ing postage.

This is a curious book—issued from the office of *Progres Medical*, 14 Rue des Carmes, Paris. It is so full of tables of measurements, analysis of records, original observations, etc., that it can be only said of the work in a brief notice like this, that it supplies data invaluable to the physiologist, important to the moralist, and of interest to every student of vicious habits or propensities. The measurements of the head, facial angles, etc., of hundreds of prostitutes and thieves are tabulated side by side, and compared with

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like tables and measurements of the honest and virtuous, and it is surprising to note the many and marked differences. One is almost led to suppose that moral depravity depends greatly on physical deformity.

L'Intoxication Chronique par la Morphine, t ses Diverses Formes. Par Dr. L. R. Regnier, Ancien Interne en Medicine des Hopitaux de Paris, etc. Paris: E. Lecrosnier et Babe, Editeurs. Bureaux du Progres Medical, 14 Rue des Carmes, 14. 1890. Paper. 8vo. Pp. 170. Price, 80 cents, including postage.

This monograph on "Chronic Intoxication by Morphine, and its various forms" is of great practical interest in this day, when morphinism is becoming common. Reports of 67 cases, each showing peculiarities in the forms of opium intoxication, are detailed, and for the help of him who wishes further to pursue the subject, quite a full biographical table is given. We wish we had the space to copy the three pages of the seventeen conclusions drawn by the author from his facts, figures, observations and experience. To all who can read the French text easily, we would recommend a careful examination of this book.

The Pulse. By W. H. BROADBENT, M. D., F. R. C. P., Senior Physician to. and Lecturer on, Clinical Medicine in Medical School of St. Mary's Hospital, etc. *Illustrated with 50 Sphymographic Illustrations.* Philadelphia: Lea Brothers & Co., Publishers. 12mo. Pp. 312. Cloth. (From Publishers.)

Of the series of "Clinical Manuals for Practitioners and Students of Medicine," being published by the renowned publishers, there is scarcely one more universally serviceable to the student than this one on the pulse. The value of the "tactus eruditus" is nowhere better illustrated than in the skill which recognizes the quality of the pulse; for by it alone many diseases can, with much certainty, be diagnosed. After giving a history of the theories of the pulse, with a statement of the manner of its production, its significance, the mode of feeling it, its relation to heart-sounds, the book begins its practical part with a consideration of a frequent, an infrequent, an intermittent, and an irregular pulse. The author then tells of the pulse as influenced by variations in arterio-capillary resistance—low and high arterial tension. Then he describes the pulse in various acute diseases, in valvular diseases of the heart, in aneurism, in kidney diseases, in intermittent albuminuria, and in affections of the nervous system. An excellent index of the contents of the book is appended.

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Editorial.

The Medical Society of Virginia

Will convene its Twenty-first Annual Session at Rockbridge Alum Springs, Va., Tuesday night, at 8 o'clock, September 2nd, 1890, and will be in session through the 4th, if it does not extend into the 5th. All possible preparations for the pleasant entertainment of Fellows, guests, etc., are being made by Dr. J. Edgar Chancellor, Resident Physician at the Springs, and chairman of the Committee of Arrangements. The circular announcement of the session which is being distributed by the Executive Committee, indicates that the session will be interesting and profitable. A full report of the session will occur in our October number, as the September number will be issued during the week of the session. One of the matters of interest during the session will be awarding Dr. Hunter McGuire's prize of $100 for the best original essay on "The Diagnosis, Pathology and Treatment of Chronic Cystitis in the Male." Several eminent members of the profession, not Fellows of the Society, have promised to attend and contribute papers. We note especially the names of Dr. Joseph Price, of Philadelphia, and Edward Ricketts, of Cincinnati, mentioned in the official announcement of the session. It is to be hoped that many of the fraternal delegates from the several State Societies will also be in attendance. Another matter of interest to be noted is the goodly number of new Fellows—at least, a larger number of Applicants for Fellowship are already received than at any previous year—so far, (a month) in advance of the session. The usual summer round trip rates to Goshen (depot) on the Chesapeake and Ohio railroad, allowed by all connecting lines of railway, are the best terms that could be secured from the several companies. These rates can be obtained from the ticket agents on railroads nearest the homes of those who propose to attend. The Hotel Management of Rockbridge Alum Springs will charge only $1.50 a day per capita during the week of the session, and this rate will be allowed to all who wish to remain longer.

American Public Health Association.

The Eighteenth Annual meeting will be held in Charleston, S. C., December 16–19, 1890. The Preliminary Announcement has been issued by the Secretary, Dr. Irving A. Watson, of Concord, N. H. The topics selected for conside-

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ration during this meeting are: Sanitary Construction in House Architecture; Sewage Disposal; Maritime Sanitation at Ports of Arrival; Prevention and Restriction of Tuberculosis; Isolation Hospitals for Infectious and Contagious Diseases; Establishments in Favorable Climates for Persons having Tuberculous Predispositions; and then Papers on Miscellaneous Sanitary and Hygienic Subjects. Dr. H. B. Horlbeck, of Charleston, S. C., is chairman of the Committee of Arrangements.

The Medical Examining Board of Virginia

Will meet at the Rockbridge Alum Springs, Bath county, Virginia, Tuesday, September 2nd, 1890, at 8 o'clock P. M. This evening's session will be for the routine business of the Board, such as arranging questions for examination, etc.

The examination of applicants for license will be begun promptly at 9 o'clock Wednesday, September 3rd, and will continue for two days. Every hour of the time from 9 A. M. to 11 P. M. of each day is occupied in the examinations (except the hours from 3 to 4 P. M. for dinner and 7 to 8 P. M. for supper).

Applicants for examination must be on hand from the beginning of the first examination, which will begin at 9 A. M., Wednesday. The first examination will be on Chemistry; the questions will be put on the blackboard at 9 A. M. and are taken down at 12 (mid-day), when the questions for the next subject of examination will be immediately put up and taken down at 3 P. M., etc. Questions once taken down are not put up again. Hence the great importance of each candidate being punctual at 9 A. M., Wednesday, September 3rd, 1890.

Each candidate undergoing examination is expected to sign a paper containing a statement to the effect that he has neither received nor given any information on any of the subjects under examination during the time of the examination. Any party wishing to be examined, should come prepared with the examination fee of *five dollars* required by law, and report immediately to the Secretary of the Board (Dr. Paulus A. Irving, of Farmville, Va.,) who will be in the hall *half an hour* before the appointed time, to issue in due form the permits for examination.

Candidates for examination are not allowed to leave the hall after once entering it, until they have handed in their papers relating to the subject then on the blackboard.

Furthermore, they are not allowed during the progress

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of the examination to communicate with each other verbally or by notes or signs. Visitors will not be allowed in the hall during the examinations except by official invitation of the Board, and under no circumstances will they be permitted to communicate with or interrupt the candidates during the time of the examination.

Candidates in turning in their papers to the respective chairmen of Sections, must sign them, not with their names, but with *the numbers* assigned them by the Secretary, which numbers are to be known only to the parties and the Secretary, and by which numbers only are the papers as returned by the candidates examined and marked by the respective Section Examiners. Each candidate will have a desk or table assigned him by number, and he is expected to occupy only that desk during the examination.

Board can be had at the Rockbridge Alum Springs at the rate of $1.50 per day for members of the Board and candidates for examination during the session of the Board.

DR. HUGH M. TAYLOR, Richmond, Va., *President.*

DR. PAULUS A. IRVING, Farmville, Va., *Secretary.*

Sympathy With Dr. Geo. J. Engelman.

The North Texas State Medical Association, during its late session in Bonham, Tex., June 10 and 12, 1890, passed resolutions of sympathy and condolence with Dr. George J. Engelman, of St. Louis, Mo., President of the Southern Surgical and Gynecological Association, because of his bereavement by the death of his wife last March. Such testimony of sympathy indicates the great affection entertained for Dr. Engelman by the Southern profession. He is now on a European trip in search of health, and hopes to return in September restored in health and prepared to devote the rest of his term as President to the interests of the Southern Surgical and Gynecological Association which is to assemble in annual session in November in Atlanta, Ga. Dr. Engelman has the best wishes of friends all over America, but nowhere more than of hosts of professional friends in the Southern States.

The Kentucky School of Medicine

Closed its session of 1890 with a matriculation registry of about 300 students, of whom 101 became graduates. The prospects are that there will be more than 300 students next session—probably 350.

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Female Physicians in Insane Asylums.

In the report of the Third Days' Session (June 12th), at Niagara Falls, N. Y., of the Association of Medical Superintendents of American Institutions for the Insane (given in the Buffalo *Courier*, June 13), we notice that "*The Employment of Women Physicians in Institutions for the Insane,*" was the theme selected by E. N. Bush, M. D., whose paper, in his absence, was read by Dr. Andrews, of Buffalo. The writer expressed himself as decidedly opposed to the employment of females as physicians in the asylums from practical experience, the results of which were illustrated. During a period covering eight years of observation, it was stated that there were fewer cures and a greater percentage of mortality in the asylums where women were employed, than in those whose entire staff consisted of men. Inasmuch as this subject has of late been debated at some length, the paper was of great importance. It was evident that a large majority of the members concurred with the writer of the paper."

This record of experiences of those who have had ample opportunities to judge, should be kept before the minds of those whose duty it is to make selections of physicians for so important a trust as the insane of a State. Virginia is making the experiment of having a female physician in one of her important insane asylums. Let us see the result before we express an opinion.

The Mississippi Valley Medical Association

Will hold its 17th Annual Session at Louisville, Ky., October 8, 9 and 10, 1890. The profession is invited to attend. Those wishing to read papers will please to send in the titles as soon as possible to the Secretary, Dr. E. S. McKee, 57 N. 7th St. Cincinnati. *The American Rhinological Association* will hold its Annual Meeting at the same city the same week, that is October 6, 7 and 8, 1890. The Secretary, Dr. R. S. Knode, of Omaha, Nebraska. will be glad to receive the titles of papers to be read. The combined attractions of these two Associations will make a trip to Louisville well worth the time and money.

Dr. I. E. Atkinson

Has been elected Dean of the Faculty, University of Maryland—Dr. J. Edwin Michael having resigned that office, although he retains his Professorship. Dr. Atkinson's address is 605 Cathedral St., Baltimore, Md.

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Messrs Hazard, Hazard & Co., Sail Under False Colors.

Under the heading, "An Injustice to an Honorable House," the *New York Medical Journal* of July 19th, quotes our editorial in July number, and then speaks of Hazard, Hazard & Co., as "a house which * * * * * we believe, still deserves and receives the confidence of the medical profession." If our contemporary knew us, and knew the facts connected with the cause of our July editorial, we are sure it would accredit us with being "slow to anger and plenteous in mercy." We were as much surprised as any one could have been to find out some months ago that Hazard, Hazard & Co., is a dishonest firm, and not deserving a particle of the confidence that has been reposed in it. Hence, we were not surprised to see it recorded in the *New York Herald* of Thursday, July 24th, that Rowland N. Hazard, the chief of the firm, who was the owner of the store (Fifth Avenue and Twenty-fourth streets), *swore to a lie.* Will not our New York contemporary now retract its statement that this house "still deserves and receives the confidence of the medical profession?" Our record shows that we have always dealt leniently (and will continue to do so) with a house that acts honestly in a business failure; but this house, Hazard, Hazard & Co., played the part of tricksters and faliifiers in dealing with this office, and their exposure as such is intended solely to protect our friends from imposition and frauds.

The New Orleans Medical and Surgical Journal

For July, 1890, comes to us in new dress, and with sixteen extra pages. It is the beginning of Volume 18. The article by the President of the Louisiana State Board of Health, Dr. S. B. Oliphant, on "The Improved Disinfecting and Fumigating System at the Mississippi River Quarantine Station" is interesting, instructive and suggestive; and the text is greatly improved by descriptive full size wood cuts of the Station, etc Under the present management, this *Journal*, always good, is better. See advertisement page in this issue, to which we refer our readers with pleasure. Subscribe to it.

The Medical World

Writes us that the reference to pulsatilla for orchitis, etc., which the *Memphis Medical Monthly* credited to *Medical Standard* should have been credited to it—May, 1890, number, page 177. Give credit to whom it is due.

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The Harbaugh Veterinary Remedy Co., of Norfolk, Va.,

Is a very important one to every doctor—especially in the country, remote from professional veterinarians. The "family physician" is often called upon in the country "to doctor" horses, etc. This Company furnishes a case at a moderate cost, supplied with the most approved remedies for most of the diseases common to such animals, and each case contains a pamphlet prepared by Dr. W. H. Harbaugh, of Richmond, Va., who has held positions of important trusts under the United States Government, investigating the histories, causes of epidemics among animals, etc., and their treatment, etc. Dr. Harbaugh's high position in his profession, and his excellence as a practitioner, are too well known to the people and medical profession of this community to require any endorsement. The "remedies" manufactured in Norfolk by the company bearing his name, should be in the possession of farmers as well as physicians.

Mobile Board of Health Changes.

At a meeting of the Mobile County Medical Society, June 28, 1890, Dr. D. E. Smith was elected a member of the Board of Health *vice* Dr. J. F. Heustis resigned. In the resignation of Dr. Heustis, the Board of Health of Mobile County loses an active and efficient officer, but in the choice of Dr. Smith, the vacancy is well filled. Dr. Smith enjoys a large and lucrative practice, and for over thirty years he has been found at his post of duty whenever epidemics raged over Mobile. The city of Mobile is justly proud of her Board of Health, and Mobile, as well as the State of Alabama at large, feel protected from the invasion of contageous and infectious diseases as long as this learned Board has charge of her health. The following compose the Board:

Dr. T. S. Scales, Health Officer; Dr. George A. Ketchum, President; Drs. Goronway Owen, Caleb Toxey, Samuel R. Olliphant and D. E. Smith, members.

Richmond City Medical Elections.

As the result of the biennial election of a new City Council, which went into office July 1st, Dr. J. G. Trevillian has been elected Physician and Surgeon to the Richmond City Almshouse. Two years ago he was displaced from this position by the election of Dr. M. L. James; this year he displaces Dr. James. Politicians in Council, in making such changes, seem to think "a turn-about is fair play." Dr. W. T. Oppenheimer has been re-elected President of the Richmond City Board of Health for the term of two years.

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VIRGINIA
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VOLUME XVII—No. 6. WHOLE NUMBER, 198.

RICHMOND, SEPTEMBER, 1890.

Original Communications.

Art. I.—The Abuse of Lavage of the Stomach.

By I. N. LOVE, M. D., of St. Louis, Mo.

The one great difficulty attending the introduction of any new procedure of a surgical or therapeutic character for the relief of any disease, is its improper application and abuse. Every new drug, and every new surgical operation, has to run the gauntlet of extreme and uncalled-for application.

The tendency in the profession of medicine, the same as in all other walks of life, is for the new thing to become "a fad." Unfortunately in the practice of medicine, the "fad" is brought in relation to very serious things. Questions affecting disease often involve life and death, and for this reason the constant effort of every member of the profession should be to conscientiously endeavor to pursue the most conservative course in a general way in the practice of medicine and surgery, but particularly when it comes to the application of new ideas.

Among the procedures which have been recently introduced, there is none more rarely justifiable, and yet more

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frequently used in excess, than the washing out of the stomach, which is expressed under the term "lavage of the stomach."

It undoubtedly proves of value in extreme cases of catarrh of the stomach, when the secretions are in excess, and retained along with particles of food, and when a great tendency to fermentation is present. In such cases occasional washing out of the stomach has a very pronounced beneficial effect; but it should not be repeated often, or continued for any length of time. I cannot believe that cases where it should be brought into requisition are frequent. I have, within a few months, had come under my observation at least a dozen patients of a nervous, imaginative temperament, who were victims of the excessive washing out of the stomach. A record of one case will illustrate the class of patients to which I refer:

Mrs. R., a hearty, robust appearing woman, mother of two children, had been troubled with slight symptoms of dyspepsia for a year or two. She was a very intelligent woman, thoroughly well read on nearly all topics, and unfortunately was given to the study of physiology.

Her attention became directed to her stomach and the laws of digestion. Her mind was almost completely occupied with the consideration of this subject. The result may be imagined. The treatment which was indicated was nervous tonics and a form of nutrition easily digestible and also easy of assimilation. Anti-fermentative remedies of course should have been given if necessary, and possibly some form of pepsine. A trip away from home, involving plenty of out-door exercise would really have been better than all else.

Naturally giving herself a great deal of thought and directing her mental energies to her stomach, and discussing the subject in season and out of season, she learned of the magical effects produced in certain cases by washing out the stomach. Of course it soon followed that her stomach must be washed out, which it was every day for about two months, and then twice a week for three or four months.

When she came under my observation, I found a condition of neurasthenia and a well marked case of gastro-mania, if the term is allowable. The history as given was detailed to me. I at once recommended that she let her stomach

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alone, suggesting that this was a cavity which nature never intended should be washed out, and that we were never justified in going against nature's instructions, except in the rarest instances, and that where a case called for such a course, the procedure should not be repeated often.

I administered tonics, consisting of nux vomica in combination with the albuminate of iron and elixir of lactopeptine, to aid digestion, giving, at the same time, the tenth of a grain of mild chloride three times a day, with a little Listerine, well-diluted, to prevent fermentation, and advised an "outing" trip, where plenty of fresh air, exercise, and occupation of mind, would be involved, and for her, to a very considerable degree, to eat what she wanted, and to forget that she ever had a stomach if she could. The instructions were followed—the result satisfactory.

Within so brief a period, for twelve such cases to be observed strengthens me in the opinion which I have long held, that one of the most desirable things for a dyspeptic to do is to get his mind away from his stomach; in fact, I question whether the advising of a careful selection of diet, considering the danger of the patient concentrating his mind too completely upon what he eats, and the form of it, be not worse for him than to simply let him take his chances.

General principles should be advised. Direct that food which is anti-fermentative be given. Lean meat, along with eggs, is frequently acceptable. But certainly, if it be our desire to direct a course of treatment which will, so far as possible, take the mind of our patient away from the organ disturbed, washing out the stomach is the last thing in the world that should be recommended.

I will admit that it is a treatment by which the physician can influence his patient most wonderfully. The effect is striking, and with neurotic patients—and most dyspeptics are neurotic—the impression made by the Doctor (with his festine tube with a quarter or half gallon of medicated water) upon his patient is very pronounced.

I desire simply to utter a note of warning, to take a position in favor of applying this mode of treatment only in the rarest instances, and then it should be repeated but a few times, save in those cases of chronic and incurable ulcers,

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either benign, or cancerous of the stomach where cleansing is absolutely necessary; even then I believe that the cleansing can be effected by the drinking of large quantities of warm water and the prompt expulsion of the same, or else permitting it to remain in the stomach and percolate through the pyloric orifice into the bowel below.

ART. II.—Remnants of Inflammation in the Perimetrium and Parametrium.

By ISAIAH H. WHITE, M. D., of Richmond, Va.

EX-PRESIDENT ACADEMY OF MEDICINE, ETC.

The operations of Battey and Tait, now so often performed, have shed much light on the nature of the changes produced by inflammation in the uterine adnexa, and demonstrated that there is no morbid process peculiar to the female sexual apparatus, but that the same pathological phenomena occur here as in other portions of the body.

It is safe to say that seventy-five per cent. of the cases who consult the gynæcologist, labor under some form of inflammation of the parametrium or perimetrium, or remnants of the same. Hence the importance of being able to diagnosticate these pathological changes, and, if possible, devise some means of relief.

Many women with remnants of inflammation in the neighborhood of the uterus, make no complaint referable to the genital apparatus; yet these pathological cases may make the most marked and varied symptoms in other organs. No other disease better illustrates the importance of the gynæcologist being, at the same time, the physician as well.

When we remember how richly the parametrium is supplied with ganglia and nerves, and how freely they anastomose with each other, and with the peripheral and central systems of nerves, we can readily understand the effects on the nervous system when these ganglia and nerves are imbedded in cicatricial tissue.

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In women of the higher class who are more prone to neuropathic conditions, the effects of these remnants of inflammation are more marked; but even in women whose nervous system is healthy, we observe neuralgia in the trunks and branches radiating from the lumbar and sacral plexuses; especially the sciatic and crural.

The most frequent complaints are constant pressure, burning and painful sensations in the sacrum; a sensation of burning deep in the pelvis, or in the skin of the lower parts of the abdomen, or on the external genitals. Any sensory motor or secretory neurosis may occur; those of the stomach and intestines are most common and persistent—such as dyspepsia, anorexia, eructatious nausea, vomiting and enteralgia.

Of the symptoms referable to the genitals, the most common are leucorrhœa, too frequent menstruation and metrorhagia.

When the uterus is fixed by residuea of inflammation in the parametrium, attention is called to it by each step or forcible motion. Some feel a constant pressure in the pelvis or a dragging sensation in the course of the broad ligaments; others feel distinct pain at some point in the pelvis. When the ovaries are displaced and fixed by peritoneal adhesions in the broad ligaments, the pain is greater, and often so intense as to make life unbearable.

It is a serious matter to contemplate how many of these unfortunate women are indebted to members of our profession for their deplorable condition. Thirty years ago, the sole armamentarium of the gynæcologist consisted of a speculum and a stick of caustic; how many women were made miserable for life by this treatment it would be hard to determine. When the uterine sound and syringe were added, and intra-uterine medication began, new victims were daily added to the list. The sponge-tent, the curette, and splitting and divulsion of the cervix, have made so many women bed-ridden and wretched for life, that it is a question whether the speculum, which rendered these operations easy of per-

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formance has not been productive of more harm than good to the female sex.

The unsatisfactory results heretofore obtained by the use of iodine, glycerin tampons, the hot douche, etc., has led to a resort to laparotomy for the removal of the tubes and ovaries and the loosening of adhesions. Leaving out those cases in which pus is confined in the tubes—for here there is no question as to the propriety of the operation—but confining the enquiry to the other products of inflammation in the neighborhood of the uterus, it is to be feared that laparotomy has become too much a matter of routine.

If complete restoration surely followed this operation, although the woman's life is not imperiled by her disease, albeit her suffering may render life unbearable, we would still be warranted in subjecting her to the risk of life incurred by laparotomy. But unfortunately such a happy result is not always obtained. Quoting from Hunter's "Persistent Pain After Abdominal Section:"—"In some cases which have probably occurred to us all, time brings no relief, and pain of some kind persists. There are a few cases in which the suffering, after operation, is even greater than it was before."

The one who devises some means of making one of these unfortunate women comfortable, if not cure her, will have conferred as great a boon on a large number of the female sex as the discoverer of anæsthesia. Let us hope, from the experience of Apostoli and others, that we have in electricity such an agent, which, by relieving local congestion, or promoting absorption of inflammatory remnants, quiets pain and palliates the symptoms, and, in conjunction with massage, the hot douche, glycerin tampons, etc., prevents the recurrent inflammatory attacks to which these cases are prone.

The McArthur Hypophosphite Company offer some very seasonable information on the white card-board in the advertisement department. Read it and make a thorough test of the Syrup, which they invite you to do, free.

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ART. III.——Some Surgical Affections of the Nose.*

By S. G. DABNEY, M. D., of Louisville, Ky.,

PROFESSOR OF PHYSIOLOGY AND CLINICAL LECTURER ON DISEASES OF THE EYE, EAR, AND THROAT, IN HOSPITAL COLLEGE OF MEDICINE, VISITING SURGEON TO EYE AND EAR DEPARTMENT LOUISVILLE CITY HOSPITAL, ETC.

Abscess of the Nasal Septum.—This disease is of interest from its comparative rarity, from the liability to mistake in its diagnosis, and from the brief and incomplete description of it given by the standard text-books. Morell Mackenzie says (*Œsophagus, Nose, and Naso-Pharynx*): "I have myself met with only one case of blood-tumor, and one of septal abscess." He devotes about half a page to abscess of the septum; describes an acute and chronic variety; says the acute is mostly traumatic, but makes no mention of syphilis as a cause. In the exhaustive work of Bosworth on "*Nose and Naso-Pharynx*," which appeared in 1889, I find no mention of septal abscess, either among the lesions of nasal syphilis or elsewhere. Sajous gives two short paragraphs to the subject, and mentions that the abscess is occasionally caused by syphilis. He does not speak of the traumatic variety.

The best description of the disease I have seen is by Clinton Wagner (*Diseases of the Nose*, 1884). He says: "Acute idiopathic perichondritis of nasal septum occasionally occurs, but very rarely. The pus will form and burrow between the mucous membrane and the cartilage, and the membrane will be forced downward and outward and made to project beyond the orifices of the nostrils, and thus resemble huge polypi. The external nose, at the same time, may be greatly swollen and œdematous. There is great elevation of temperature and increase in the rapidity of the pulse. The condition is a serious one, as meningitis or pyæmia may be developed; and should the patient recover, it may be with destruction of the cartilage, causing the nose to fall in and producing an unsightly deformity." This

* Read before the Medico-Chirurgical Society of Louisville, September 5th, 1890.

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author says he has met with but one case in his own practice, and, with the exception of a case reported by Dr. Delavan, he has been unable to find others on record.

I wish to report three cases of abscess of the nasal septum which have occurred more or less recently in my practice. As will be observed, one case was syphilitic, one traumatic, and one apparently due simply to the general cachectic and debilitated state of the patient. It is of interest, too, that two of these cases were considered erysipelatous by the attending physicians, and so treated for a considerable time, while, in the third, there was a suspicion of a malignant growth. I am sure that when we consider the brief and unsatisfactory account of this disease, even in special text-books, and its entire omission from most works of general surgery, it will not seem strange that the general practitioner, unaccustomed to intra-nasal examination, should overlook the correct diagnosis.

The *first* case seen by me was in a young lady about 22 years old. I was called in consultation by the attending physician, who had suspected erysipelas. I found the patient in bed with a fever of 102°. The temperature had been higher. The disease was already of five ar six days' duration. Pain in and over the eyes and general headache was complained of. There were great swelling, œdema and redness of the face and lids, closely resembling erysipelas. The nose was occluded on both sides, and nasal respiration of course impossible. Externally, the nose was very much swollen, red and tender. Examination of its interior showed the septum enormously distended, and pressing out the ala on each side. Fluctuation was well marked, and incision gave exit to an amount of pus which one would have thought it impossible for the nose to contain. The cavity was syringed out with a solution of bichloride of mercury, and in the course of a few days, the swelling, redness and pain subsided. There remained, however, a depression at the junction of the cartilaginous and bony septum, especially visible from a side view of the face and giving to the patient a rather pug-nosed appearance.

There was no history of trauma, and the young lady's general health had been fairly good. About two months previous to my seeing her, a little sore had appeared on her

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cheek near the angle of the mouth, but there was now no sign of it remaining. Her physician suggested the possibility of this being the primary lesion, and the nasal abscess syphilitic; but as there were absolutely no other evidences of such diathesis, we decided to wait till the diagnosis was better established before putting our patient on treatment for syphilis. A few months later, an unmistakably specific eruption appeared, and the mixed treatment was immediately begun.

The *second* case was in a young girl about 15 years old. Her home was in the country. While milking, she had been kicked on the nose by a cow. Soon afterwards, great pain, swelling, and redness of the face appeared. The physician in charge diagnosed erysipelas, and treated it accordingly. As no improvement was obtained, the child was brought to a physician in this city, through whose courtesy she was referred to me. The appearance was identical with that of the case above described. Incision on each side of the septum let out a very large quantity of pus of bad odor. Recovery was uninterrupted under the use of the bichloride and Listerine syringing.

In this case, too, there was a sinking in at the junction of the cartilaginous and bony septum, but neither here, nor in the preceding case, did it seem great enough to warrant operation for its correction.

Case third was also in a country lady, whose debilitated general condition made it impossible for her to come to the city. I saw the patient in consultation with her family physician at her home. This physician told me that he had some months previously removed several mucous polyps, and that, as the swelling in the nose had increased very rapidly, and was attended with great pain, he feared a malignant tumor had succeeded the polyps. Not being accustomed to or prepared for thorough intra-nasal examination, he called for a specialist in consultation. I found considerable swelling about the face, especially in the eye-lids. The nose, naturally large, was distended to an enormous size. There was no marked redness externally, nor any decided tenderness. The symptoms were evidently of a subacute or chronic character. The septum was so bulging as to press out each ala of the nose. Incision gave vent to a large quantity of pus of horrible odor.

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In this case, no cause could be found for the nasal abscess except the cachectic state of the patient, who was a confirmed opium eater, and very pallid and weak.

Mucous Polyps.—Of nasal tumors the mucous polyp is, of course, the most common, and is too well known to need any extended notice. It is remarkable how many polyps may be packed in the nasal chambers. Dr. P. G. Lewis, in the *London Lancet*, reports recently a case in which he removed fifty-one polyps from the nose and post-nares of a patient. I have myself lately taken more than twenty out of the nose of an elderly German lady. I would express my conviction that polyps should be removed with the snare—not with the forceps—and the practitioner who finds it necessary to do such work should accustom himself to the use of the nasal speculum and the head mirror. When the polyp has been removed, its point of attachment should be touched with the electro-cautery. This is also the best agent for the destruction of those excrescences which are often seen to accompany polyps, and which, by pressure from the turbinated bones on the septum, cause very unpleasant symptoms. It should always be remembered that, when the polyp has been removed, further treatment to the nasal chambers will be necessary to prevent its return and put the nose in a healthy condition.

Hard Papilloma of the Septum.—Papillomata having their origin from the nasal septum, are not very common. I have lately seen one case:

A gentleman from near Pineville, Ky., consulted me last April. Projecting from the septum into the right nasal chamber, about three-fourths of an inch from the orifice of the nostril, was a hard tumor about the size of a raspberry, and with a warty surface. It was free from pain, and not tender, but bled easily. It was attached by a broad base, and caused inconvenience simply by the partial nasal obstruction and by occasional hæmorrhage. I removed it with the knife—the bleeding being moderate. Microscopic examination showed it to be a papilloma. As the patient said it had been removed once before, and had returned, I touched its place of attachment with the electro-cautery.

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Intra-Nasal Gumma Simulating Sarcoma.—A gumma within the nose may sometimes closely resemble a malignant growth. Seiler has reported a gumma of the septum which he removed under the belief that it was a sarcoma—its real nature being subsequently revealed by the microscope. In this connection, I may refer briefly to the following case, which has already been published:

A young married man, father of several healthy children, consulted me for an obstruction in his left nostril. I found a dark red, hard growth pressing from the inferior turbinated on the septum. The growth of the tumor had been very rapid. The lymphatic glands on the corresponding side of neck and angle of jaw were enlarged, and there was acute pain over all that side of the face. This group of symptoms was strongly suggestive of a malignant growth, but the rapidity of its disappearance under iodide of potassium left no doubt that the tumor was syphilitic. The patient at first denied any venereal taint, but subsequently admitted that he had had a sore on his penis and taken medicine internally for it. He disclaimed any knowledge of other symptoms of syphilis.

Septal Spurs and Deviations.—Few subjects in rhinology have of late been more discussed than the importance and treatment of deviations and irregularities of the nasal septum. It is well to bear in mind the warning of Mackenzie that "it is unnecessary, where no inconvenience is felt, to restore geometrical symmetry to the turbinated bones, or to invest the living membrane of the nose with artistic merit." It is, nevertheless, true that many affections of the upper air-passages are originated and intensified by nasal obstruction.

I have seen cases of epistaxis in which bleeding occurred almost daily, and often at most inopportune times, entirely relieved by the removal of a shelf-like projection from the septum.

In a few cases, the removal of a septal spur has cured troublesome tinnitus in the ear of the same side. In others, a feeling of fulness in the ear has been relieved by the same procedure. These results are the more intelligible in the light of the statement of Woakes, that the inferior nasal

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meatus should be considered the physiological culmination of the Eustachian tube. Still more important is the relation between septal irregularities and chronic nasal catarrh.

The treatment of such conditions must, of course, be surgical. The exact method of procedure differs in different hands. Bosworth is enthusiastic in favor of the laws of his own device. Holbrook, Curtis, Seiler, and others, prefer burrs or drills worked by the electromotor or the dental engine. It would seem that the objection advanced by Bosworth to this mode of operation, namely, that it is impossible to watch and guide the instrument with sufficient precision, is well taken.

The plan I have followed and found satisfactory is to use a blunt pointed bistoury, narrow but strong and sharp, for the cartilaginous deflections or spurs and the saw for similar bony projections. I first spray the nasal chambers thoroughly with a 1-4000 solution of bichloride of mercury—then use a weak spray of cocaine, and finally place a little piece of cotton, soaked in a strong solution of cocaine, on the part to be cut, and leave it there for several minutes. I have never, with one or two exceptions, seen any constitutional effects from cocaine so applied, even in a 10 or 20 per cent. solution; though I keep a stimulant always at hand in case there should be any serious depression. Hæmorrhage is seldom enough to be at all serious, though it often obscures the steps of the operation, and thus makes it more tedious than it would otherwise be.

Hypertrophic Rhinitis.—Real thickening of the nasal mucous membrane is distinguished from simple turgescence most easily by the application of cocaine. The turgescence disappears completely, but if thickening is present, it will be seen as a cushion covering either uniformly or, more frequently, only in certain places, the turbinated bones—very often at the anterior end of the middle turbinated and pressing against the septum.

After a thorough trial of acids in this condition, I have settled on the galvano-cautery as being most efficient, and

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asy of application. Under the use of cocaine, it is abso-utely painless, and very rarely is there any subsequent in-onvenience felt after it. The electrode used should be nar-ow, and as small an area burned as possible, otherwise a ery disagreeable dry condition may result.

Post-Nasal Growths and Thickenings.—Enlargement of the denoid mass at the roof of the mouth, the so-called third onsil, may be either in the form of a broad cushion or as apillary growths hanging into the post-nasal space. In ny experience, the cushion-shaped enlargement has been nore common. Its removal has been accomplished most horoughly and easily by the electro-cautery carried through he nose and guided by the rhinoscopic mirror back of the alate. Under the use of cocaine, this can be done without ain and with very little discomfort. It is, in this form of rowth, to be preferred to the post nasal cutting forceps. n the papillary growths, hanging from the roof of the pha-ynx, and giving to the finger the sensation of a bunch of vorms, on the other hand, this instrument is superior to the autery.

For posterior hypertrophies of the turbinated bones, and hickening and turgescence on the septum, posteriorly, I se the electro-cautery, applied usually through the nose.

ART. IV.—Hystero-Epilepsy or Hysterical Convulsions.*

By H. R. COSTON, M. D., of Lincoln, Tenn.

The Nomenclature of hystero-epileptiform convulsions is deficient, inasmuch as it would lead us to consider that large and varied group of symptoms known as "hysteria," "hys-tero-epilepsy," etc., wholly dependent on the uterus as the *ons et origo*. This term, however, has become so firmly fixed in medical nomenclature that it would be useless to attempt to replace it with another, as is amply proven by the numerous words which have, at different times, been

* Read before the Lincoln County Medical Society, July 16, 1890.

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proposed and not accepted. Some authors do not differentiate between hystero-epilepsy and hysterical convulsions. We consider them identical.

Definition.—This affection may be defined to be a paroxysmal, spasmodic affection, essentially hysterical, but simulating, more or less, epilepsy; common to females, but not entirely relegated to them, and occurring more frequently about the approach of puberty, but restricted exclusively to no particular age—involving also, to a considerable extent, the will and various mental manifestations or functions.

Pathology.—Of the morbid conditions upon which these convulsive seizures depend, but little is known. Bristowe, (*Practice*, page 973,) says: "It is, so far as we know, a purely functional disorder."

We shall not attempt, however, a review of the opinions of others, but simply say that, in our own opinion, it probably depends on lesions of the sympathetic nervous system. The careful observer will see many evidences of the involvement of this system. True, other organs are affected, but not every woman who has a hyperæmic ovary, a uterine fibroid, a lacerated cervix uteri, or a hyperæsthetic vagina, is the subject of the various manifestations of hysteria; but if hysteria depend solely upon lesions of the genitalia, it follows that we should have hysterical manifestations in every case of inflamed ovary or other disease of the reproductive system.

Again: The flushing and paling of the face during an attack, the laughing, crying, and wild gesticulating, and, especially, its (hysteria) development from the association of the subject with others similarly affected point strongly to the sympathetic system.

Again: The sympathetic system through its filaments to the cord, is, to a great extent, under cerebral control. Now, given a patient in status hystericus even, and make a sudden and powerful mental impression on this patient, and what is the effect? Instantaneous, complete, and permanent relief in many instances. A blow on the belly from the fist may cause sudden death from its effects on the solar plexus

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or some of its satellites. May not disease produce hysteria, in which one can often trace a resemblance to shock, with its succeeding excitement? The nature of the pathological process, its exact location, whether in the ganglia themselves, in the nerves, or in both, I do not pretend to say. Obvious difficulties are in the way of determining these facts; and much long and patient labor will have to be expended in elucidating them—if facts they prove to be.

Ætiology.—Considering hysterical convulsions as only an aggravated form of hysteria, that which acts as an exciting cause of the one may—indeed necessarily, acts as a cause of the other. The most potent cause of this affection is undoubtedly an inherited predisposition. This may show itself in some form of hysteria transmitted directly from mother to daughter, or indirectly from the inheritance of an exalted neuropathic constitution in general. Sex undoubtedly plays an important part in the ætiology of this disease, it being seldom found in the male sex. "All causes which lower the nutrition of the nervous system, such as hæmorrhages, insufficient nourishment, impaired digestion, and anæmia, predispose to hysteria." (Ross, *Dis. Nervous Sys.*, page 936.)

I would call especial attention to the predominance of causes so situated as to involve lesions of the ganglionic system. Pelvic and abdominal affections are more frequently accompanied by hysterical manifestations than those of the thorax, and these, in turn, are oftener complicated by hysteria than those of the upper extremities. Anything which may lower the vitality, or interfere with the function of this system of nerves, is liable to become the cause of an hysterical outburst. Among the most frequent of these are hyperæmia and inflammation of the ovary, the uterus, tubes, vagina, vulva, the abdominal viscera, fright, anger, jealousy, hard mental labor, "disappointed love, or hope deferred," grief, depressing news, unhappy connubial relations, etc. Other less frequent causes may be found in irritation and disease of the breasts, consumption with all its devitalizing accompaniments, as is illustrated in Case III

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elow; cerebral and rhachidian disease, constipation, indigestion, the delayed appearance of the menstrual flux, and *suppressio-mensium*, as illustrated by Cases II and IV respectively. Any derangement of the monthly flow may act as a cause, but this is less frequently a cause than it is generally believed to be. A desire to have the sympathies of others bestowed upon herself, or to excite fear or alarm in others, is sometimes a cause. The hysterical diathesis may also be acquired by "concentrating unduly the attention on personal sensations and sentiments." (Flint, *Practice*, page 842.)

This latter, too, affords to the inquirer an explanation of the more frequent occurrence of this disease in woman than in man. A young lady of a decidedly nervous temperament is disappointed in love. The entire sympathetic system is at once deranged. She has fits of weeping, outbursts of angry reproaches, prayerful entreaties to return, rapidly alternating with each other, and these continue until the next monthly period, when the flow is greatly diminished, retarded, or probably wholly absent. Now, is the deranged menstrual flux the cause of the hysteria? I answer emphatically, No; but rather, the morbid processes, producing the hysteria, are also the cause of the amenorrhœa. The amenorrhœa is only one of the many phenomena indicating the disturbed physiological equilibrium of the sympathetic nervous system, the exciting cause of which is to be found in the unfaithfulness of her betrothed.

We are, therefore, inclined to believe that the predisposing cause of hysteria, in any of its many varied forms, is to be found in the sympathetic system.

The exciting cause may be any of the above-mentioned, circumstances or other disorders or mental conditions.

Symptoms.—The symptoms of this affection are numerous and varied, according to the gravity of the attack. But as the more simple forms of hysteria are liable to merge into the more severe or convulsive form, we will first glance at the symptoms of the simpler form—afterwards considering more accurately the graver conditions. You will observe

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an expression of depression on entering her presence. She tells you that she "feels bad all over;" that she has no energy; that she is unable to confine her mind to her work or reading; that sometimes she feels that she will be compelled to go to visit a friend or neighbor, or, again, that she does not want to see any one; that she has a headache, which is not precisely what you would understand by a headache, but that it is an uneasy feeling; that her jaws hurt her, especially the lower—this is a very frequent symptom—but, on examination, you find no cause, and, on closer questioning, you find it to be only a feeling of distress or discomfort, and you observe her to frequently rub them with her hands, or to hold her face buried in her hands; her legs hurt; she has pains passing through her bowels; her back is very weak; something in her stomach rolls up into her throat and chokes her (globus hystericus); a painful sense of constriction around the waist. All this, and much more, she tells you, with a degree of earnestness calculated to deceive the unwary. Indeed, you may direct attention to any organ in the body for a few moments, at the same time rapidly asking questions, and describing to her how you expect her to feel, and in a short time you can have her believe that she actually feels that way. She is nervous and easily excited; ready to suspect her husband of unfaithfulness; is jealous or neglectful of him; cries and laughs when there is nothing to excite these emotions; is easily provoked; quarrels with those who are acting in the best of faith toward her if they fail to lavish pity and affection on her, but very affectionate, occasionally to a disgusting degree, to those who sympathize with and pet her. In the more aggravated form, the patient may remain for many months or years, suffering from feigned paralysis of an arm or leg; she may apparently vomit blood from having caused bleeding from the mouth or throat by scratching with the finger, pin, or needle; perhaps she has swallowed her own excreta, and then, by an act of the will, she can of course, by a small amount of irritation of the pharynx with the finger, vomit

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fæces and urine. She may pass hard substances into the vagina, and affect to be the subject of vesical calculus. While in many instances the patient may be the most chaste in her language, yet, in too many cases, she is but too careless as to the amount of her person which is exposed, and in her restless rollings on her couch she may leave uncovered a leg, or not notice that her clothing is so loosened as to partially expose a breast, more especially if she have white, well-rounded breasts. She is ever ready to believe that her troubles are of uterine or ovarian origin, and willingly submits to a digital or ocular examination, and occasionally she may have an exacerbation of her troubles apparently from no other cause than that she may demand that the physician replace a prolapsed ovary or womb, which she affirms has come down since the last visit, and is causing her great pain.

The sexual appetite is frequently morbidly excited, but may be diminished or totally absent. In all cases, there is constipation, and sometimes dyschezia. There may be either ischuria or enueresis. The menses are generally diminished in quantity, but not disturbed in regularity. The appetite is variable.

We pass now to the convulsive seizures with which we started out more particularly to deal, and in which every case of hysteria is prone to terminate if not checked. They vary in severity and duration. There may be only one convulsion a week, or there may be several a day; they may last a minute, or fifteen minutes, or even an hour. They may probably be best illustrated by a few cases, which I give as briefly as possible to do justice to the subject:

Case I.—Miss A. M. F., æt. 19, had come from Knoxville, Tennnessee, to spend the summer at this place, in search of health; had had an aunt in the asylum; an uncle had died of pulmonary disease of a chronic nature; father died of pneumonia; mother living. She had been subject to convulsive seizures for about six months. Her trouble had been diagnosticated "subacute cerebro-spinal meningitis." She was of excellent physique, ambitious; in good financial circumstances, save that a goodly portion of her property

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was in the hands of her step-father, who, it seems, was trying to wrong her out of it; was baffled in her desire to take some special training in music and art by her financial involvement; was engaged to be married to a most estimable young man of Illinois, but was not sure that her affection was enough to justify the union. Her eyes had been examined by an oculist without results. She was easily excited; would start when spoken to unexpectedly; was fond of taking long strolls alone through woods, along streams, and about graveyards; cared but little for society, but would cry heartily over the letters of a lady friend; wished to go in search of a friend who had left home and had not been heard of for quite a while; complained of pain in the nucha and back of the head; was obstinately constipated. The seizures were varied in character; she would be attacked at church, at a social gathering, or while entertaining company; sometimes she would be found leaning against a tree in the yard, or reclining on the sofa; at other times she would fall into the arms of a friend or drop to the floor. She was never wholly unconscious; there was no stertor; no frothing at the mouth; no trismus; opisthotonos was marked; convulsive movements of the limbs; hands and feet cold; pulse and respiration normal; eyes lightly closed. After remaining in a semi-comatose condition for from five minutes to half an hour, she would rouse herself, and rarely have another convulsion during the day. After three months of tonic and sedative treatment, having first gained the absolute confidence of my patient, and given a firm promise of rapid recovery, she was enabled to accompany her betrothed to an aunt in the North, where, in a few months, they were united, and she is now a mother.

This is a fairly typical case, and is given *in extenso*. In this instance, the exciting disease, real or imaginary, was located in the meninges of the cord and brain. Let us consider a case of different type.

CASE II.—Miss F. P., æt. 15, Fisk, Ala. "Monthlies" had never appeared but once a month. She had a convulsive seizure at my first visit; she was having convulsions one after another, and I was enabled to observe them carefully. For a few moments she would not speak—then she would call vehemently for her mother to come to her, at the same time pointing upward and declaring that she could see her, although she (the mother) had been dead for several years.

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She would struggle violently, requiring two or three to hold her in bed; jumping from one side of the bed to the other; throwing her arms and legs wildly about, and twisting her body into the most grotesque shapes. Unseen by her, I took a pin from my coat and gave her a sharp prick in the arm. She snatched the arm from me with a cry of pain, and looked horrors at me. I at once gave orders that the attendants leave her alone; that she was not going to hurt herself. This I said by her bedside. Then the attendants and I left her, and took our seats. In half a minute, she was quiet. A sedative and emmenagogue, with a general tonic, and she was permanently relieved.

Here is a case due to the retarded appearance of the menstrual flux, added to a disordered nervous system. The sympathetic centres had not yet recovered their perfect, physiological equilibrium.

Let us now consider a case excited to action by tuberculosis.

CASE III.—Mrs. C. J., colored, aged 20; married two years; mother of one child; had been healthy until the last few months; had first convulsion three weeks before I saw her. The convulsions were general, but she did not lose consciousness. We easily eliminated all other convulsive affections.

Here is a case seemingly due to the general devitalizing effects of the consumption on the system. We may add, however, that this woman was haunted by the idea that she was bewitched by her husband's mother and sister; the idea of witchcraft being yet alive in the minds of the colored race.

Now, let us glance hastily at a case from a different cause.

CASE IV.—Mrs. O. J. B., æt. 22; married two weeks; had always been healthy. Her "monthlies" having lasted a few days longer than usual, they were not yet passed when her wedding-day arrived, and she washed herself in cold water, thereby suppressing them. Added to this, the husband's parents were opposed to the marriage. Watching her, one would observe her to jerk her head to the right side, rolling her eyes in the corresponding direction; some rigidity of the masseters; slight contraction of the fingers;

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no absolute unconsciousness. She was obstinately constipated; complained of severe headache; some tenderness of the left ovary on pressure; appetite and digestion good.

Here, then, we have the history of a bath producing some congestion of the genital apparatus, coupled with the excitement of the same incident to marriage.

These few cases will serve to show the nature of these convulsive seizures. We should, however, direct attention to those rare cases in which the patient remains for hours, or days even, in a semi-conscious condition, refusing all nourishment, or to speak, or attend to any of her physical needs. This is known as status hystericus, and may occur in men.

Differential Diagnosis.—We shall not long dwell upon this, having devoted so much time to the symptoms, and simply enumerate those affections for which it is most liable to be mistaken, and giving epilepsy and uræmic eclampsia short notices.

Epilepsy is more liable to be mistaken for hysterical convulsions, or, *vice versa*, than any other affection. The epileptic is absolutely unconscious; consciousness in hysteria is never entirely abolished. The hysterical patient does not easily resist the application of sternutatories; prick her with a pin; saliva is seldom tinged with blood; dash a bucket of cold water on the exposed belly or down her back; the presence of hysterical symptoms before and after the convulsion. Epileptics rarely have hysteria.

Uræmic convulsions may be diagnosticated by an examination of the urine, the development of dropsy, general anasarca, etc.

Other affections liable to be mistaken for hysterical convulsions, are: Meningitis, apoplexy, puerperal eclampsia, catalepsy, paralysis, coma from any cause. Ether may be given for diagnostic purposes in the paralytic forms In the stage of excitement preceding anæsthesia, the patient will be very apt to move the limb.

Prognosis.—With regard to life, this is good; with regard

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to duration, it is uncertain. Epilepsy or mania may develop in the patient.

Treatment.—This should be directed to the mental condition, to whatever visible disease may exist, and to the restoration of the normal physiological equilibrium of the disturbed nervous centres. It is sometimes best to tell the patient plainly that she is the subject of hysteria; at others to agree that she is the subject of disease, but that she will soon be relieved. The first great step to be taken is to gain the absolute confidence of your patient. You may then rest assured of success. To whatever disease there may be relationship, apply the proper remedies and leave no organ uninvestigated. Sedatives are required for the exalted nervous action. Among these, the bromides are oftenest prescribed; but the too free use of these, to the exclusion of others, is to be condemned. They should be given only by the direction of the physician, and never given to the patient to use *ad libitum*. Of the bromides, we would prefer those of camphor or zinc, as by them we get the combined action of the bromine and camphor or zinc; the bromide of lithium in renal complications; those of sodium and potassium are also useful—that of soda being less apt to interfere with the functions of the stomach than the potassium salt. Cimicifuga is useful; phosphorus, strychnia, electricity, and fiction in the paralytic forms; electricity, or the cold douche, may be used to abort a convulsion. Ether, chloroform, valerian, musk, amylnitrite, are each useful; assafœtida is excellent; hypnotics are to be used with care; aloes or cascara sagrada or other good purgatives in constipation. Occasionally, it is useful to produce emesis by apomorphia, ipecac, or lobelia; diuretics and diaphoretics are frequently of service. I have seen good results from the use of pretty decided doses of digitalis; atropia has been recommended in hysterical aphonia. General tonics are always to be combined with these, such as iron, quinine, ammonia, nux vomica, calumba, hydrastine, quassia, etc. Sometimes a plaster over the lumbar or sacral regions is of use.

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If there is a lacerated cervix or perineum, repair it; if a prolapsed womb, give it support. In short, relieve whatever co-existing disease there may be present. But we must condemn the wholesale castration of women for hysterical (and if we may be allowed to digress, epileptic) convulsions. Possibly there are cases in which it is justifiable, but they are very rare.

ART. V.—**Advantages of Continuous Ring in all Operations Requiring Bone-Plates, Segmented or Continuous Rings.**

By J. M. FORT, M. D., of Paris, Texas.

The ring I prepare and advocate for all operations requiring bone-plates, segmented, or continuous rings, is similar to the segmented ring of Dr. Brokaw, except the rubber enclosing the cat-gut is one continuous piece, and the ligatures are secured around the cat-gut in this manner:—The needle, armed with the ligature, is passed through the rubber, *over* the cat-gut and out on the opposite side; then return the needle through the same hole, pass *under* the cat-gut and out through the hole at which it was entered. Then make a draw-loop, and for safety tie twice; then draw the loop, pressing the knot back into the lumen of the ring, so that it is secure around the cat-gut only. This ring can be used in all operations requiring rings or bone-plates for their performance.

In my judgment, the advantages of this ring are as follows, viz:

First. The rubber is not acted upon by the contents of the bowels, and consequently holds the parts in apposition, and in the same position that they are left by the surgeon, keeping the apertures in the bowels open or patulous until the cat-gut in the lumen is absorbed, giving ample time for adhesion to take place.

Second. It is more yielding than the bone-plates, allowing fecal matter to pass through, which would probably be obstructed by the unyielding plates before their absorption had taken place.

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Third. The bone-plates must be prepared and kept ready for use when occasion requires them, the process of their preparation requiring too much time to make them instantly available in an emergency; whereas these rings can be prepared ready for use in five minutes, should an emergency arise in the practice of the physician calling for their use. This same objection of being unavailable applies to the cat-gut mats.

Fourth. In using the continuous rings, we undoubtedly get more regular and uniform pressure than can be secured by the segmented rings, since the traction made upon the ligatures in the segmented rings is exerted from points where the ring is cut into, and consequently cannot be exerted as uniformly as when the rings are continuous.

Dr. Brokaw says, in a letter to me, that he has used a continuous ring, but admits never one with the ligatures secured in the manner I secure them, which, in my judgment, adds to the value and superiority of these rings.

All experiments, conducted by myself and other physicians, upon animals in which these rings were used, have given admirable results.

Clinical Reports.

Nasal Catarrh of Twenty-eight Years Duration Cured in a few Weeks by Removal of a Rhinolith.

By JOSEPH A. WHITE, M. D., of Richmond, Va.

Senior Surgeon to the Richmond Eye, Ear and Throat Infirmary.

Miss ———, from Hollins, Va., consulted me July 10th, 1890, about a nasal catarrh which had annoyed her for some twenty years, and for which she had received sundry and varied treatments without avail. On inspection of the left nostril, from which the most of the discharge came, I observed far back what seemed to be a mass of inspissated secretion. As the spray did not dislodge it, I used the probe, and from the sensation conveyed by it, thought I had encountered necrosed bone covered by secretion. The odor was very similar to that of atrophic rhinitis.

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When I applied my palate retractor and made a careful post-nasal examination, I was satisfied it was a foreign body of some kind, wedged tightly between the posterior part of the inferior turbinated and the septum opposite.

It was with some difficulty I dislodged and removed it through the mouth, and considerable hæmorrhage resulted from laceration of the tissues.

After washing it, it looked like a piece of slag from an iron furnace, with sharp points projecting all around it.

From the day it was removed, all odor ceased, and in a few weeks the discharge and unpleasant features of the catarrhal condition disappeared. They were due to the presence of the rhinolith, which kept up the constant local irritation. As long as it was present, treatment of the catarrh availed nothing. There was no history of a foreign body ever having gotten into the nose, and as far as I could discover, there was nucleus.

Rhinoliths, however, have been known to form without any foreign body as a nucleus, although this is quite rare. One point of interest in the case, apart from the rapid cure of the catarrh, was the absence of pain.

Usually rhinoliths produce considerable discomfort, either dull, aching, or sharp neuralgic attacks in the face, orbit and forehead.

But in this case, whilst she had occasional headaches following eye work, and which I attributed to a marked astigmatism, and which were relieved by its correction, there was no complaint of pain such as is usual in such subjects.

In the following case which I reported in 1884 to the Medical Society of Virginia, there was considerable neuralgic discomfort, which was entirely relieved by the removal of rhinolith, and I will take the liberty of reporting it again in this connection.

Aural Disturbance, Eye Trouble and Anomalies of Sensation in the Cheek due to Rhinoliths.—Mrs. F——, forty-eight years of age, came to me some months ago, complaining of general discomfort on the right side of the face and head. She had for a long time suffered with alternate numbness and neuralgia of the right cheek, with occasional tinnitus aurium and slight defect of hearing, and with disturbance of vision and discomfort in the right eye. She had recently consult-

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ed an oculist in Baltimore, who prescribed glasses and some internal treatment. She could see better, but still had more or less discomfort in the eye In my routine examination of the nose, I noticed a considerable stenosis of the right nostril, due to what seemed to be a swelling on the right floor of the nostril, and to a projection or outgrowth from the cartilaginous septum, just above the swelling, the two abnormalities completely blocking the lower meatus. I first cut down through the mucous membrane covering the swelling on the floor, and my knife grated on a hard body. With probe and forceps I succeeded in enucleating what looked more like a piece of slag from an iron furnace than anything else, weighing 14 grs., and which I took to be a rhinolith. In like manner I cut in and removed the projection from the septum, which proved to be a similar body, weighing 5 grs. Both seemed to be encysted or sacculated, as it were, with a growth of healthy-looking tissue over them. Their removal, followed by a two weeks' after treatment, resulted in entire relief of all the symptoms, which have not appeared to this date.

200 *East Franklin Street.*

High Fall, with Comparatively Slight Injuries.

By M. D. HOGE, Jr., M. D., of Richmond, Va.

On July 10th, I was called to attend H., age 22, who was suffering from the effects of a very high fall. On reaching him, I found that during the previous night, while sleeping with a friend in a hotel, he had walked in his sleep to the window, which was lowered from the top, had climbed over it, and let himself drop from the fourth story, perpendicularly down to the ground below, a distance of forty-four feet, falling squarely upon the soles of both feet on an iron grating cellar.

He was immediately carried into a room by the night-watchman, and his friends and physician summoned.

Three hours afterwards, he regained consciousness, and stimulants were freely administered. When I saw him, twelve hours after the accident, his feet and legs up to the knees were enormously swollen and discolored, so much so that it was impossible to make a correct diagnosis as to fracture. There was, however, no displacement of the long bones, or axis of the foot. The first lumbar vertebra was

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very painful on pressure and on the least movement in bed, but only a slight prominence could be detected.

Under the left arm-pit the skin was scraped off, and there was a slight abrasion on the dorsal surface of the nose.

In falling on the iron grating (the prints of which were plainly visible on his feet for three weeks afterwards), he doubled up and came over on his hands and face. There never has been the slightest symptom of motor or sensory paralysis in the extremities, bladder, or rectum. Later, on repeated examinations of the feet, no bones could be detected as broken, but he has been left with a typical case of flat or splay-foot (pes planus), the arches having been obliterated by tearing apart of the ligaments.

The remarkable feature of the accident is, that a person, in falling such a distance (forty-four feet), upon such a surface, should not have received much more severe, if not fatal injuries. He had, on several previous occasions, walked in his sleep. His mother and an aunt were somnambulists. The latter narrowly escaped being drowned five times by walking at night into a river near her house.

Case of Extensive Suppurative Inflammation of Abdominal Contents—Death—Autopsy.

By BEN. H. BRODNAX, M. D., of Brodnax, La.

I saw Mr. H., on the 25th of November, 1889, for the first time. He was suffering with a severe cough, salivation from mercury, frequent vomiting, and a severe pain in the right-lumbar region, between the liver and hip bone. The skin of the body and the conjunctiva, were very yellow, and his urine was wine colored, but clear. The pain, which must have been very severe, was deep seated. A cord, of about two inches in diameter, extended from the symphysis pubes along the right iliac and lumbar to the right kidney region; the skin covering the same was slightly flushed. He complained of some tenderness and enlargement of the right-testicle, and the lymphatic ganglia in the right groin. The temperature was about 101°.

The ordinary medicines for unloading the bowels were given. Camphor poultices were applied to the testicle, and

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concentrated foods were administered. No alcohol was given, on account of the irritability of the stomach.

The bad symptoms seemed for awhile to give way; the skin and eyes cleared up, as also the urine; the liver got to work properly; but the irritable stomach and bowels, with tenderness on pressure, the testicular and lymphatic pains continued, though less severely.

That I tried everything I could think of, as well as laying the experience of my brother practitioners under contribution, goes without saying.

There was some improvement in January, but in February, the pain and tenderness of bowels and other organs became greater. The right leg became painful, swollen very large, but not like phlebitis, and a tumor appeared surrounding the navel. No enlargement of the liver and spleen could be detected. Other symptoms appeared—shortness of breath, with faintness at times, among others.

I asked Dr. I. J. Newton to see him on March 10th. He made a very careful examination, which impressed him that the case was fœcal impaction with ulceration, and a large tumor of doubtful character, perhaps cancerous. He was satisfied that the tumor caused the large and tender testicle and leg by pressure.

My proposition of an operation was objected to on account of his weak condition, the obscure character of the tumor, and its extent and location.

By his advice, I put the case on cream of tartar and sulphur three times a day, with one-half ounce of olive oil, which, at the end of the week, cleared out the bowels, when the extent of the tumor was more clearly shown. Now difficulty of swallowing fluids, soup and water, and vomiting of bile was experienced. The body, from lack of nourishment, which could not be retained, was much wasted, and exhaustion extreme. The tumefaction of the thigh disappeared—death came on gradually, with a perfectly clear intellect to the last moment, and he breathed his last at 9 o'clock A. M., on March, 25th.

At 8 o'clock P. M., I invited Dr. Geo. H. Ogbourne to open the abdomen, which he did from the pubes to the diaphragm. There were no adhesions to the peritoneum anteriorly; adipose tissue entirely absent. The parts pushed back disclosed the liver normal as to size and color, with a few (4 or 5) small cicatrices of old ulcers. Stomach empty and normal, spleen slightly atrophied, transverse colon normal. Except these, the other viscera was a mass, agglutinated by

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fibrous deposit, including the bladder and kidneys. The entire mass was solidly attached to the right-lumbar, and to the left of the spinal column from the pubes posteriorily and in front, to the diaphragm by a base averaging six to eight inches in width. I can compare it to nothing else but a gravid uterus of eight months, smooth and shining, except where the surface was rendered nodular by abscesses filled with a clear reddish jelly. There were perhaps twenty of these perceptible, varying in diameter from a half to one and a quarter inches in diameter, but flattened by pressure against the abdominal parates.

Cutting into the mass, pus in large quantities oozed out. There was no possibility of tracing the course of any of the intestines.

There was at no time very much fever, 101° being the highest point reached. The pain, from his description, was neuralgic—sharp, cutting, and intermittent. No medicine seemed to be of any use except for a very short time; hypodermics of one-half to three-fourths grain of morphine twice per day, gave him ease.

Original Translations.

From the German. By M. D. Hoge, Jr., M. D., of Richmond, Va.

Diabetes Mellitus.

Meyer has recently expressed his views (*Berl. Klin. Wochenscher.*, 1890), on this subject in the following sentences:

1. The quantity of sugar in the urine is not always a true expression of the gravity of the disease.

2. Acute, subacute and chronic diabetes, corresponds more accurately to its course than a division into different forms.

3. The cardiac manifestations stand in an intimate relation to the diabetic process, and during treatment this fact must be kept constantly in view.

4. A strict meat diet is not to be recommended; fats and a moderate amount of the carbon-hydrate must be combined with it.

5. The moral effect of encouragement plays a prominent part in the case.

6. Diabetes is only relatively curable.

Mental Disease in Chronic Nephritis.

It is a well-known, but no easily understood fact, that, in the course of chronic nephritis, accompanied by marasmus

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and anæmia, an alteration in the psychical condition takes place. It sometimes is only of short duration, but is apt to return again. These attacks are to be compared to the epileptoid points in those suffering from true epilepsy, but are the equivalents of uræmic convulsions. (*Rundschau*, 1890.)

Chologogue Action of Olive Oil.

The question as to the effect of olive oil on the secretion of bile, led Rosenberg (*Schmidts*, 1890), to make the following experiments: A fistula was made from the gall bladder to an external opening on the skin in several healthy dogs, and the ductus choledochus obliterated, so that by no possibility could it become lost in the fæces. In the experiments lasting through three months, it was noticed that the quantity of gall diminished, but the consistency increased. In the animal from which the food was withheld, the flow always increased at the accustomed time of feeding. During the first hour of digestion, the secretion increased to reach its maximum in the second. When fed on fat or oil, the amount secreted was much larger than that which followed a meal of carbon hydrates and albuminates. Oil was found to increase the flow of bile to much greater extent than any other form of food; turpentine and salicylate of soda were observed to have this same effect to a large degree.

Anæsthesia in Minor Surgery.

In such cases as opening a bone felon, scraping a small fistula in the gums, removal of epithelioma in the face, or in fact, any small operation requiring a local anæsthetic lasting from two to six minutes, Dobish (*Rundschau*, 1890), recommends the use of the following solution in a Richardson spray:

℞.—Chloroformi..... ℥iiss.
Æther. sulphuric .....℥iv.
Menthol. ....gr. xv.
M. Sig.—As a spray.

Consultations.

The following is an extract from an excellent editorial on the subject in the *New York Medical Monatsschrift* of recent date:

The real aim of the consultation with the other physicians at the bedside of patients is of course to benefit the sick. The idea originated from the fact that four eyes see more than two; and further, the examination, diagnosis and

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prognosis can be made impartially; and finally, when the attending physician has exhausted his own resources. It is true that now and then consultations are called for other reasons. A young and inexperienced physician has made a wrong diagnosis, and he wishes the older brother to shield him; or when the final end is only too near, another is asked to bear the odium of the lethal ending; and lastly, to divide the ill-gotten fee with his brother. Aside from operative cases, in which the family physician often forms one of an applauding and appreciative spectator, the result of the consultation should be the sum of the best thought and therapeutic measures upon which the two have united. In all cases where a patient wishes a consultation, it should be granted, because he has right on his side. Many young physicians are sensitive on this point, and look upon it as an insult to their medical knowledge, and as a want of confidence in their method of treatment, but in course of time, as they gain more knowledge and experience, this will disappear. Let us always remember that the physician is there on account of the patient, and not the patient on account of the physician.

Analyses, Selections, etc.

Epidemic Influenza, commonly called "la Grippe."

During the session of the Florida State Medical Association in April, 1890, Dr. A. T. Cuzner of Gilmore, Fla., submitted some of his experience as a practicing physician and microscopist with "la grippe." During 1882, while engaged in certain microscopical investigations for Prof. John Phin, Editor of the *American Journal of Microscopy*, he was requested to call on Dr. Ephraim Cutter, of New York, and examine some specimens of rhizopods, which the doctor claimed were the cause of "epidemic influenza." Prof. Phin thought Dr. Cutter might have mistaken ciliated epithelium for the forms he claimed to have found in the discharge accompanying the disease, although asthmatus ciliaris (the name given the forms) were admitted in Kent's *Manual of Infusoria*, while Prof. Leidy denied their existence in his great work on *Rhizopods* for the United States Government.

Dr. Cutler's son was at that time suffering from the disease. Dr. Cuzner examined specimens of mucus from his

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nasal passages, and, for the first time, saw the "asthmatus ciliaris." They could not be mistaken for ciliated epithelium. He took some of the mucus to Prof. Phin, who agreed with him.

About six months after, Dr. Cuzner suffered from what appeared to be coryza or cold in the head. After suffering some days, he examined some mucus discharged and found a number of living asthmati in active motion, rocking from side to side and gracefully waving their cilia. He has had this complaint four times since, and each time has found the same living organisms.

His last personal experience with the disease was during the spring of 1888 While serving on the staff of the Medical Bureau of Relief, under charge of Dr. J. Y. Porter, during the yellow fever epidemic of the same year, one of the foreign physicians, who was in the habit of visiting at the Bureau, called with Dr. Cuzner to see a patient suffering from yellow fever, and who had the vomit. While examining some urine microscopically. Dr. C. noticed the doctor was suffering from influenza, and obtaining some of the discharge, placed same under the instrument, and plainly saw the living forms of asthmatus. The doctor also saw them distinctly. He afterwards exhibited them to Dr. Porter, Dr. Strauss, and some of the other doctors engaged at the Bureau.

While making the examination at Dr. Cutter's, he was informed that Dr. J. H. Salisbury, former New York State Chemist, was the original discoverer of asthmatus, and that he had written an account of the parasites in Dr. Haller's *Zeitschrift fur Parasitenkunde* (Jena, Prussia), in which he says:

"Infursorial catarrh is purely a parasitic disease, arising from a peculiar animalcular organism armed upon one side with cilia. This organism assumes a great variety of shapes and sizes. By watching its development and metamorphoses under the microscope, it may be seen to transform itself into many different forms, represented in the figures from 1 to 17. The most usual shapes appear to be either spherical or oval, as seen in figures 1 to 8. Each frequently sends out a proboscis, at the end of which is an elongated and dilated cilium, as represented at 14, 15, 16, and 17. This proboscis may be in the centre of the mass of cilia, as at 15 or 16, or at the side, as at 14 and 17. It may be drawn in, leaving a nipple-like elevation, as at 10, or it may disappear entirely, leaving the organism oval (8) or spherical (6).

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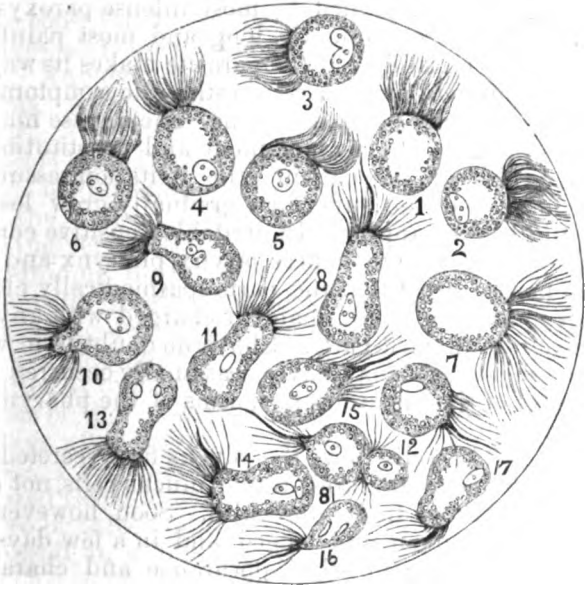
The proboscis often only partially disappears, or is only partially drawn in, while a constriction occurs in the form, as represented at 13 and 14. It may be simply a largely dilated cilium, as at 17 and 18, or the cell-walls may go out, forming a more or less sharp protuberance, as at 15; or the walls may go still farther out, forming a more or less fusiform organism, as at 16.

The young are developed within the parent cell, and, when mature, are discharged at the end of the organism opposite the cilia, as seen at figure 18. The parent becomes quite dilated before delivering, and as the young one is discharged, the parent cell becomes shrunken and shriveled for a time. The aperture, however, soon closes, the wrinkled, shriveled condition of the sac walls disappears, and the parasite moves about again fresh, plump, and as lively as ever.



The cilia are in active motion during the greater part of the life-existence of the animal and produce a most aggravating irritation of the mucous surfaces.

The young organisms, 1, 2, 3, 4, 5, and 6, have a rolling, rocking, vibrating motion from side to side, making about one-third of a revolution on the transverse axis at each oscillation. The more mature cells either vibrate slightly or

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have a tremulous motion, their cilia not moving altogether, as at 5, but vibrating in different directions.

Symptoms.—After once obtaining a foothold on the mucous surfaces of the air-passages, they multiply rapidly. At first, they attack the mucous surfaces of the eye and nose, causing free secretion of tears and thin mucus, and often intense paroxysms of sneezing. The organisms gradually travel from the nasal surfaces down into the fauces, larynx, trachea, and larger and smaller bronchi. As soon as they reach the fauces, there is a burning heat and irritation in the parts that excites severe coughing. The tendency to cough constantly increases as they and the irritation gradually travel farther and farther down the air-passages. When the larger bronchi are reached a heavy, hot, feverish pain is felt in the parts they invade, accompanied by flushes of heat and fever.

This stage is accompanied by most intense paroxysms of coughing, which are frequently long and most painful, especially in the morning. If the parasite makes its way into the smaller bronchi and air-cells, asthmatic symptoms of a distressing character often supervene. The disease may continue according to the temperament and constitution and state of health of the patient; the irritation assumes a chronic form, and the sufferings gradually grow less and less until they disappear. In irritable, sensitive constitutions, the irritation in the fauces, larynx, pharynx and bronchi, becomes so great that the parts spasmodically close in attempts to swallow or to inhale air charged with anything which excites inflamed parts. I have no doubt from what I have seen that deaths may have occasionally occurred in the acute stages of the disease from spasms of the pharynx and epiglottis.

Secretion.—The cells from the mucus first secreted from the surface invaded are large, round, mucus cells, not differing materially from those in health. Soon, however, they begin to be shrunken and jagged, and in a few days they assume—many of them—the appearance and characteristics of puss cells (muco-pus). The secretion is thin, clear, and watery, at first, and small in quantity—soon becoming thicker and more turbid. The cough is short, and somewhat painful, and the invaded surfaces feel irritated, raw, and hot. The cough raises but a small quantity at a time, and relieves the irritation and itching but for a few moments.

Whenever the parasites are developing rapidly on the

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velum palati most intense paroxysms of coughing are excited, which are long, persistent, and painful, and sometimes are accompanied by severe spasms of the epiglottis.

Often an irritation and itching will be felt on one side of the throat only, exciting constant desire to cough. In such cases, the irritation will always be on the side on which the nasal passage is closed. In such cases, inhaling remedies through the mouth very often fails to check the cough more than a few moments. By clearing the nasal passage, and inhaling through it, the coughing and irritation are soon checked. The reason of this is, that the parasites are developing rapidly on the posterior surface of the wing of the palate on the side of the nasal stoppage, and are constantly working down into the larynx and pharynx on that side.

Asthmatic Symptoms.—When the parasites reach the smaller bronchi and air-cells—especially in irritable and sensitive constitutions—asthmatic symptoms begin to show themselves, and often become distressing and almost unendurable. Any excitement in the circulation aggravates the symptoms. The evening and night air always increase the sufferings.

Contagion and Prevention.—This disease belongs to those that may be transmitted from one individual to another, though the transmission is not very readily accomplished. In working very closely over about sixty cases of the disease, examining the sputa under the microscope for many hours together in each instance, and in several severe attacks, devoting days to the examinations, I have taken the disease but six times myself, and in two instances have transmitted it to my family. I have usually begun to feel symptoms of the presence of the parasite in from four to eight days after beginning to treat a case. In all of my late cases, I have taken precaution to inhale a solution of crystallized carbolic acid, one drachm to the pint of water, every two or three hours, and to take twenty drops tincture ferri-chloridi in a tumbler of water, two hours after each meal. This course has lately protected me from taking the disease.

Treatment.—All means ordinarily used for colds or coughs are worse than useless in this disease. While they tend to get the system out of order, they do not retard the development and progress of the causes. The remedies that do any good are such as either destroy or retard the growth and reproductiveness of the parasites. Fortunately we have many

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agents belonging to this class, among which are carbolic acid, tinct. ferri-chloridi, quinia sulph., sulphuric acid, nitric acid, hydrochloric acid, etc., all of which remedies should be in solution with sufficient water, so they can be inhaled without producing irritation. The inhalations should be made freely, and as often as every hour or two. In addition to inhaling, give two grains of quinia sulph. every four hours, and twenty drops of tinct. ferri-chloridi in a glass of water, morning, noon, and night. It is surprising how much a single thorough inhalation will relieve a suffering patient. If the sputa is examined before the first inhalation, and then again after it, a remarkable difference will be observed in the condition of the parasites. Before inhalation, they are in active motion; after it, if thoroughly done, they will nearly all be found either dead or motionless.

By inhaling at short intervals and thoroughly, one leaves no chance for the parasites to get very numerous; and soon the follicles become permeated with the inhaled materials, and the cause is entirely destroyed.

In addition to the above treatment, I have found the benzoate of soda the most efficacious remedy we have. It is applied as a saturated solution by means of the nebulizer, the patient inhaling the nebulous vapor thus formed. It is very destructive to the life of the living organisms, and, if attacked promptly, they can be killed off in twenty-four to thirty-six hours. Yet others continue to be reproduced from germs for several days; therefore the treatment should be continued for about a week after the disease has apparently ceased to exist.

If the disease be not recognized, and is allowed to run its course unchecked, the treatment being applied to the accompanying symptoms and lesions, it will last a month. At the end of this time these organisms will cease to be reproduced, either on account of the secretions becoming so poisonous that they can no longer exist in them, or they become "bred out," so to speak, and the disease will "disappear of itself."

This does not always occur, however; sometimes these infusorial organisms invade vesicles of the lungs, producing an inflammatory action there. This occurring in the aged or debilitated, may end in death.

The disease becomes epidemic at certain times and seasons, being doubtless favored by certain conditions of the

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atmosphere, while it is capable of being spread abroad at any time by the breath and secretion (dried or otherwise) of the afflicted individuals. Dr. Cuzner has had the disease during mid-summer; still it is most prevalent during the spring and fall months.

The illustrations accompanying these notes were copied from Dr. Salisbury, and verified by the writer under the microscope.

Cystic Tumors of the Inferior Maxilla.

Dr. W. B. Rogers, of Memphis, Tenn., in the September number of *Memphis Journal of Medical Sciences*, says that excluding cysts, occurring secondarily in tumors found in this bone, the inferior maxilla presents two varieties of cystic growths: first, cysts occurring in connection with teeth; second, cysts not connected with the teeth, and finding origin in the bone proper.

Cysts in connection with the teeth are, (1) polyp like, attached to the roots of "cut" or fully developed teeth; or (2) dentigerous cysts, dependent upon the presence of "uncut" teeth.

Dental surgeons often find small polyp *cysts* attached to roots of teeth after extraction. These cysts contain a mucus-like substance, and sometimes pus. When small, their existence is not susceptible of diagnosis prior to extraction of the teeth; occasionally, however, one cyst so enlarges as to form a maxillary growth demanding treatment. Even in such instances, there is no point diagnostic between this and other cysts occurring in this bone. It is only by exclusion, and after incision and exploration, that the nature of such a cyst can be determined. According to Mr. Heath, these cysts lie beneath the periosteum of the tooth fang.

Dentigerous cysts are cysts occurring in the *maxillary bones*, and depend upon an "uncut" tooth, that has failed to present its crown by reason of having taken primarily an abnormal direction, or, having primarily been too deeply placed in the bone, or lastly, because of a want of development in the fang. This "uncut" tooth is always in the dentigerous cyst, which contains, besides the tooth, a fluid of serous nature, but which may sometimes be mixed with pus by reason of inflammatory changes in the cyst wall. The cyst wall is a tough, fibrous membrane, lined by epithelium, and natural to the part. This sac, by reason of irritation from the retained tooth, becomes hypertrophied; there is an

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increase of secretion from its epithelial-lined surface, and thus we have a tumor—a cyst due to effusion.

Cystic tumors is a term without a qualifying adjective, applied to that class of tumors occurring in the maxillary bones and composed of a single cyst or many cysts, finding origin in the substance of the bone and not dependent upon any aberration in dentition. They are not cysts due to retention, nor dependent on effusion into a sac natural to the part, but are purely new-formed, *adventitious* cysts. Several writers describe this affection as cystic disease of the bone, because the entire body of the bone, and even the rami, may be affected or included in one of these multilocular cysts.

The disease begins at some point and gradually extends, in some instances throughout the bone; in others, it confines itself to a segment which continues to grow, while the remaining bone shows no tendency to become affected. Dr. Rogers removed three of these multilocular cysts, which Gross terms "compound cystic tumor." These tumors occur later in life than do dentigerous cysts; they are of slow growth, and show little, if any tendency to impair the health. Dr. Rogers saw a glandular enlargement in the submaxillary region, and there were several loculi of the tumor filled with brain-like matter. He feared encephaloid disease, and that it would show itself soon in the enlarged glands, but three years after removal of nearly half the lower jaw (with the tumor), the patient was in the best of health, with no evidence of malignant disease. A section of one of these tumors will show the body of the bone expanded, the internal and external plates of compact tissue greatly thinned and crackling like parchment under palpation; the cancellous tissue will have disappeared, and its place be occupid by a single large cavity or fibrous sac, containing fluid, serous in character; or if it be a multilocular cystic growth, there will be many partitions giving many loculi lined by fibrous, epithelial-covered membranes. The fluid in these sacs varies from clear, egg albumen to dirty brown and even black, blood-stained, watery fluid—and again it is thick and encephaloid-like.

Diagnosis. Cystic tumors of the inferior maxilla are by no means of rare occurrence, and present some features in common: namely, slowness in growth, absence of severe pain, absence of glandular involvement, with no constitutional impairment except as attends any tumor interfering mechanically with mastication and deglutition. The exploring needle will detect the cystic nature of the tumors.

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Cysts attached to *roots of teeth* can only be diagnosed *in situ* after incision, and are of rare surgical importance.

Dentigerous cysts usually attend on second dentition, rarely in connection with milk teeth, and still more infrequently with supernumerary teeth. Only in the comparatively early stages of a dentigerous cyst, before its size involves the sites of many teeth, and before all normal landmarks have passed away, that a diagnosis is at all easily arrived at. When the tumor is large, and definite information concerning missing teeth is unobtainable, there are few, if any points of diagnostic value; nothing short of incision will tell the nature of the tumor. The leading point in a positive diagnosis is the fact that some one tooth (or teeth) which should be present, and that too at the site of the tumor, has never shown itself.

Cystic tumor, simple or compound. Instead of the continued non-appearance of some tooth, we usually find that one or two aching permanent teeth preceded the appearance of this tumor, and to the irritation caused by presence of these bad teeth the growth is usually attributed, and probably not unjustly. A multilocular cyst ought readily enough to be determined from cysts of any other nature.

Treatment. Obviously there is but one treatment for these tumors, one and all, and that is surgical. When they have not reached such dimensions as to have completely destroyed all outline and framework of the bone, a free incision, evacuating the contents and packing the sac with gauze, with a view of having same filled by granulation, is the proper treatment and usually succeeds. In some instances the whole external wall may be cut away, and when a multilocular cyst, the contents curetted or gouged out, leaving the internal plate. The incisions in such cases are always within the mouth, leaving no defacing cicatrices; and when the inner plate or the continuous line of the body of the bone can be left, there usually follows but slight deformity. There will come up, occasionally, cases in which the tumor has reached such dimensions, and played such havoc with the bone, especially compound cystic tumors, that incisions of sections of the bone, or even the entire maxilla, is the proper thing to do. Most of the cases that have come to me for treatment have been of the latter kind, requiring the removal of parts of the bone with the tumor—excision.

CASE I.—*Simple Cyst of Jaw.* Mrs. K., white, aged 43 years, of Mississippi, referred by Dr. W. P. Connor, present-

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ed a tumor involving the right half of inferior maxilla. The growth began some six years previous, and had attain- the dimensions of an average-sized cocoanut. It had been opened with a bistoury, and contents of a glairy nature evacuated, only to reaccumulate. Besides the disfigurement, (Fig. 1,) the growth so filled the buccal cavity as to prevent

Fig. 1.

mastication, and it was with great difficulty that the patient could swallow liquid nourishment She was so weakened

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and emaciated that removal of the tumor could not be advised when first seen by Dr. Rogers. There was no pain in the growth; no tendency to ulceration; no glandular involvement, although so long a time in existence; manipulation was painless. Fluctuation was distinct, and while there were many soft points to be detected both on the cutaneous and mucous surfaces, distinct areas of shell-like bone could be mapped out and a parchment-like crackle was very perceptible on palpation. The growth involved three-fourths of the body and lower third of ramus right side. Both portions of the bone were expanded to a mere shell. The diagnosis of cystic tumor involving the body of the bone was readily enough made, and removal of the bone clearly indicated. A free incision, evacuation and packing the cavity, is the recommended operation for these tumors, especially those of simple character (single cyst); but in this case there was no outline of body of bone left—only islands of bone scattered irregularly over a thickened sac. Hence, a more thorough operation of removal was indicated. The general health of the patient was so poor, that the first step was to evacuate the contents of the tumor by an aspirator entered through the buccal surface. More than a pint of chocolate colored, glairy fluid was drawn off, and the patient thus enabled to take nourishment liberally. At end of three weeks she returned considerably improved, and the tumor had refilled.

An incision was made along the base of the tumor, the facial artery was ligated, and by keeping carefully against the surface of the tumor very little blood was lost. Almost the entire right half of the maxilla was removed. The wound was packed with gauze and ample room left for drainage. Her recovery was rapid, and at this time, eight years since operation, she is enjoying excellent health. A cartilaginous mass has taken the place of the bone removed, and very little disfigurement exists.

The tumor proved a simple cyst—the fibrous wall was more than a line in thickness. At the floor of the sac there were several bony partitions projecting half an inch into the cavity.

Illustrative of *compound or multilocular cysts of this bone*, he briefly reports three cases:

Case I.—A colored woman from Mississippi, 40 years of age, with usual history of repeated, severe and prolonged spells of toothache, preceding the appearance of a swelling

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in the left half of the lower jaw, which soon developed to a veritable tumor. He found her as shown in Fig. 2—a

Fig. 2.

COMP. CYSTIC TUMOR.

growth as large as a cocoanut. The body of the bone and lower portion of ramus of left side were expanded to a thickness of over five inches. There were numerous soft spots yielding a sense of fluctuation between the patches of bone, so that a diagnosis of compound cyst tumor was readily made. Mastication was very much interfered with, but she was able to keep in good state of flesh on liquid and soft diet. A small exploring trocar revealed several cysts, with

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as many varieties of fluid. There was no glandular involvement The indications were that the tumor consisted of very many cysts, and consequently much solid matter in shape of partition walls and living membranes. He decided on excision instead of incision and curetting.

The incision was carried from just below the temporomaxilliary articulation, along the base of the tumor to the symphysis, then upward through the lower lip. Hæmorrhage was controlled by forceps. The tumor was then denuded of its coverings, both externally and for the greater part on its internal surface by using the handle of the knife. The bone was cut one-half inch to the left of symphysis. The ramus cut through just below the base of coracoid process, which together with the condyle was left in position. The remaining attachments of soft tissues to inner aspect were severed and mass removed. Paquelin's cautery was used to touch several bleeding points. The opening in the buccal mucous membrane was closed, and nearly two-thirds of the skin incision was united by suture. One opening was left dependent for drainage, and the cavity packed with gauze. In spite of great care, there occurred sacculation of pus, in contact with sawn end of bone, and erysipelas supervened, spreading over entire surface. After eight weeks all had healed save a small superficial surface, and she went to her home. An examination of the tumor confirmed the diagnosis of compound cyst.

CASE II.—*Multilocular cyst of right half of lower jaw in patient twenty-eight years of age.* Was preceded by toothache of much severity; general health of patient poor, and there was some glandular enlargement in nearest cervical glands. The operation was very similar to that described in Case I, and the tumor identical in make-up, excepting two of the cells composing the mass contained brain-like matter, causing me to fear a return of the disease. This patient made a rapid recovery, and three years later was in excellent health. The size of this tumor was almost equal to a large orange—extended from near symphysis to the angle. Paquelin's cautery was found very convenient in checking the free oozing from patches of small vessels.

CASE III.—*Illustrative of cystic disease of the lower jaw* is the case of Henry M., 40 years of age, very much emaciated from starvation, due to inability to take food. No glaundular implication. Nearly all of the bone involved in the tumor. The disease began fifteen years prior to appearances shown in cut, as small double cyst at roots of incisor

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teeth. These cysts were opened and injected repeatedly with iodine, nit. silver, etc., but with no benefit. Other cysts began forming. He declined further treatment at that time, and did not consult a physician till February, 1886, when Dr. Rogers saw him and advised excision of the en-

Fig. 3.

tire mass. Operation was performed without encountering much difficulty, and but little hæmorrhage. All of bone was removed save half of right and the third of left rami. Tongue was kept forward by means of ligature for forty-eight hours, at end of which time he could control it without assistance. Took nourishment well, and promised fair to recover. On seventh day after operation, after sitting up greater part of two days, he had a chill and died of congestion. The tumor weighed 7¼ pounds. Transverse diameter was 9½ inches, anti-post. thickness 7¾ in median line. A section showed dozens of cysts, typical of these tumors.

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Some New Bacterial Poisons; Their Causal Relation to Disease and the Changes in our Theories Suggested by their Action.

Dr. Victor C. Vaughan, M. D, of Ann Arbor, Mich., in a paper (*Med. News*, June 9, 1888), stated that the ordinary summer diarrhœa of infancy is not due to specific pathogenic microörganisms, but to putrefactive or saprophytic germs, which introduce disease and death by the elaboration of chemical poisons in the intestines. He now says, (*Med. News*, August 6, 1890), that able and skillful bacteriologists have made diligent search for the bacterium of summer diarrhœa, but no such organism has been found, and the probabilities are that it does not exist. The failure to find a specific germ has not arisen from the absence of bacterial species. On the contrary, the number of varieties and species has been confusingly great; but there is no constancy in the presence of any of them. In his first communication, Booker reported the isolation of eighteen species, and he has subsequently added fifteen new ones to the list. Forms which appeared frequently one summer were wholly wanting the next. The large number and the great variety were not due to contamination, for the work was done with unusual care, the cultures being taken directly from the intestines of the sick child. Thus, in the case of this diarrhœa, so frequent during the hot season, the first of Koch's rules has not been substantiated. In view of these facts the following question quite naturally suggests itself: "Are there not two or more germs which are capable of inducing this disease?"

With the hope of answering this question, I asked Dr. Booker to send me some of his cultures. This he did last February, and with three of these species I did the following work. The germs used are the *X*, *a*, and *A*, of Booker.

Flasks of sterilized beef-broth were inoculated separately with these germs, and kept in the incubator at 37° C. for ten days. At the expiration of this time the contents of the flasks were filtered twice through heavy Swedish filter-paper, and during the second filtration the filtrate was allowed to drop into a large volume of absolute alcohol, which had been feebly acidified with acetic acid. A voluminous flocculent precipitate resulted in the filtrate from each of the cultures. After subsidence of the precipitate the supernatant fluid was decanted and the precipitates from the cultures of *X* and *a* were dissolved in water and reprecipitated with absolute alcohol. The precipitate from *A* proved to be

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so sparingly soluble in water that, after thorough agitation with water, it was caused to subside by the addition of a large volume of absolute alcohol.

The precipitates were then collected and speedily transferred to a vacuum and allowed to dry over either sulphuric acid or caustic potash. They are proteid in character, yet differ in character from ordinary proteids and from one another. That from *a* forms on the porous plate a scaly, dark substance, which is easily soluble in water. From its aqueous solution it is not precipitated by heat or nitric acid, alone or combined. It is not precipitated by saturation with sodium sulphate or by a current of carbonate acid gas, and, therefore, cannot be called a globulin. It is precipitated by saturation with ammonium sulphate, and consequently, we cannot call it a peptone. It gives the xantho-proteid and biuret reactions, and on the application of heat gives off the odor of burning feathers. The proteid from *X* is lighter in color and less readily soluble than that from *a*, but in the other reactions the two agree. That from *A* is practically insoluble in water. The chemical properties of these substances will receive further attention.

All are highly poisonous. Small quantities injected under the skin of kittens and dogs, cause retching, vomiting, purging, collapse and death. Ten milligrammes of the dried proteid from *a* killed a large guinea-pig within twelve hours. A much smaller amount proved equally fatal, but the time required was much longer. When very small, but unweighed, quantities were used, many days (from ten to thirty) passed before death followed. A small percentage of the animals experimented upon with the very small doses have remained permanently unaffected.

The post-mortem appearances in all these cases have been practically the same. The small intestines are pale throughout, and tightly constricted in places. The heart is in diastole. Marked changes in other organs have not been observed.

These experiments show that three germs, which differ morphologically from one another sufficiently to be classified as different species, form poisons which also differ in their chemical properties, but which produce the same symptoms and post-mortem appearances. But no one of these germs is constantly present in summer diarrhœa. Sometimes *X* is found almost in pure culture, while in other cases this is absent and *a* or *A* abounds, and in a still great number of cases, no one of these three can be found, and

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we have in their stead another or others of Booker's long list. These three were taken at random from the number which Dr. Booker has isolated.

While *X*, *a*, and *A* differ morphologically, physiologically they are near akin. All are capable of producing powerful poisons. I propose that such germs be called *toxicogenic*. Not only do *X*, *a*, and *A* resemble one another in producing poison, but their poisons cause similar effects.

Germs, in their casual relation to disease, cannot be classified simply from their morphology; we must also understand their physiology, and something of the chemical changes which they cause by their growth.

Bacteria are divided into the parasitic and the saprophytic. The obligate parasite can live only on living matter. The baccilli of leprosy and of syphilis are probably obligate parasites. They have not been grown with artificial media. True parasitic germs do not prove speedily fatal to their hosts. Their own continued existence depends upon the continued existence of their host, or on their transference to another host. Bacteriologists have taught that the true parasite germs are the most deadly. This cannot be true. On the other hand, it is for the well-being of the saprophytic germ to destroy life, for in so doing such a germ furnishes itself with more nutriment and improves the condition of its own existence. But how can a saprophytic germ live in the human body, and how can it prove fatal? The bacterium growing in the intestines of man does not necessarily feed upon living matter. The food before absorption is not endowed with vitality. Saprophytic germs will grow in the peptone preparations in the test-tube; why should they not feed upon peptones in the small intestines? The excretions passed into the intestines are not living, and upon these also, saprophytic germs may feed. Growing in the intestines, saprophytic germs induce disease and death, by producing chemical poisons which are absorbed.

These facts, (demonstrated by the facts above, that three different saprophytic germs produce poisons capable of causing the symptoms of summer diarrhœa, and death), materially alter the teachings of the bacteriologist. The tendency of such teachings has been for the past two years towards the belief that filth in and of itself cannot cause disease—that filth must be infected with some parasitic or specific germ in order to cause disease. If any deductions from the above experiments be true, *there is no specific germ in summer diarrhœa*. All toxicogenic germs are dangerous when introduced

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into the intestines. They will there find an abundance of dead matter to feed upon—that kind of dead matter best suited for their growth. It is generally conceded that saprophytic germs can only feed upon, or at least thrive best only in the presence of diffusible proteid material. For this reason peptone is an important constituent of the nutritive gelatin which we use in our culture tubes. In the intestines these diffusible proteids abound. Many of the saprophytic toxicogenic germs are anaérobic, and in this respect also, the conditions prevailing in the intestines favor their growth.

Again, if these deductions be correct, we have, in the question of the prevention of the intestinal disease of childhood, quite a different problem from that presented by those who believe in a specific germ. We have to guard against the introduction into the child's stomach not of a single germ which abounds in certain localities, but we must protect the child from a whole host of toxicogenic germs which are widely and abundantly distributed. Milk infected with any one of a dozen different organisms may cause disease and death.

But if there are so many possible causes of these diseases, how is it that so many children manage to live? In the first place, the infant taking its food directly from the clean breast of the healthy mother, gets its food wholly free from germs of all kinds. Moreover, both in infancy and in adult life the gastric juice is a powerful germicide, especially destructive to those organisms which infect by the way of the intestines. No germ is known to have a causal relation to an intestinal infectious disease, and which is not destroyed by the action of the heavy gastric juice, when exposed to such action for only a few minutes, or for half an hour at most. As Escherich has shown, one of the great dangers in artificial feeding lies in the greater power of cow's milk to neutralize the acid of the gastric juice. Over feeding is also an important factor in the production of the intestinal diseases of infancy. The chief office of the acid of the gastric juice is to protect against infection through the intestines. Certainly every step in the process of digestion could be carried on without the presence of acid in the stomach. Even the digestion of proteids proceeds much more rapidly in the alkaline secretion of the pancreas than in the acid one of the stomach.

Again, we are probably largely protected from injurious effects of these poisons formed by the saprophytic germs in the intestines by the absorbing mechanism of the intestinal

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walls. In health, we are thus protected by the injurious effects of certain products of normal digestion. The proteids of our foods are converted into peptones, but there are no peptones in the blood, even in the portal blood. If peptones are injected into the blood they are poisonous. In health they are changed into serum-albumin and globulin while they are being absorbed. Now, these new bactarial poisons are proteid in character, as has been shown; and when formed in the intestines, the only way we can be saved from their deleterious effects is by the action of the absorbing mechanism of the intestines upon them, converting them into harmless proteids. Right here lies the explanation of the greater susceptibility of the infant to these poisons formed by the saprophytic germs in the intestines. The rapid absorption from the intestines of the infant renders the passage of these poisons into the blood unchanged more easy and certain. In this is also to be found the explanation of the favoring influence of constitutional disease, and of prostration from heat, on the frequency and fatality of summer diarrhœa. Anything which lowers the general vitality of the child, diminishes the normal resistance of the living cells to the proteid poison.

To conclude this part of this discussion, any germ capable of producing a poison in a flask containing a proteid material, is not a safe one to introduce into the intestines. It is not necessary, in order to show the dangerous character of a germ, to prove its pathogenic property by inoculating an animal through the blood. In the blood the bacterium meets with very different conditions from those existing in the intestines.

The same general statements concerning summer diarrhœa of infancy will hold good in enteric fever. The author has recently reported the isolation of proteid poisons from cultures of two germs found in drinking-water supposed to have caused typhoid fever. But, says one, the specific germ of typhoid fever has been found, and is the well-known Eberth bacillus. It is true that this organism is found in the spleen practically in every case of death from typhoid fever, and this is the sole evidence that we have of its relation to the disease. Continued fever with ulceration of the small intestines, can be induced in the lower animals by a number of saprophytic germs. The great diversity in the symptoms and course of the continued fever in different sections of the country, and in the same locality at different times, seems to me quite an argument against the

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specific character of the disease. There is now fair promise of a satisfactory explanation of the true relations between the Eberth bacillus and typhoid fever. The bacterium coli commune is constantly present in the healthy large intestine. In certain diseased conditions it finds its way into the internal organs. Typhoid fever is one of the diseases, and Rodet and Roux conclude from their studies that Eberth's bacillus is only a degenerative form of the bacterium coli commune. Just what *rôle* this germ, by altering its place of residence, plays in the causation of the disease, we do not know. But practically this observation is of great importance, because filth, in and of itself, may cause typhoid fever.

The fact that these new bacterial poisons may cause death, when injected under the skin in small amounts, after from ten to thirty days, is of great interest. We cannot believe that chemical poisons increase in amount in the body. They probably have a catalytic action, setting up a series of changes from which death results. The great majority of catalytic changes consist in the splitting up of complex molecules into simpler ones. Such a conversion is accompanied by the liberation of heat. In this we may have an explanation of the causation of fever in the infectious diseases. Some of the proteid of bacillus *a* was injected under the skin on the backs of two dogs. Retching, vomiting, and purging began within half an hour, and continued for two days, after which the dogs slowly recovered. During these two days the dogs were much exhausted, and lay for the greater part of the time with their heads on the floor, and shivering; but the rectal temperature during this time varied from 102.5° to 103.5°.

The following experiment was made with great care, but must be repeated before any positive conclusions can be drawn: Two guinea-pigs were treated with hypodermic injections of one of these poisons. Within twelve hours both were dead. Plate-cultures made from the liver, spleen, blood, brain, and spinal cord remained sterile. Small quantities of the brain and spinal cord were rubbed up in a sterilized water, and a Pravaz syringeful of this emulsion was injected under the skin of each of four guinea-pigs. These animals seemed to be very excitable the next day, throwing themselves violently about in the cages when slight noises were made about them. Three of the four died, the first after sixteen, the second after eighteen, and the third after twenty days. This would indicate that the poison accumu-

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lates in the brain and spinal cord. However, similar experiments must be mde with the blood and with emulsions similarly prepared from other organs of the body.

But if these small cellular organisms, the bacteria, are capable of converting ordinary proteids into some powerful poisons, why is it not reasonable to suppose that the glandular cells of our own bodies may under abnormal nervous stimulation or excitement also convert the ordinary proteids into similar poisons? Is the story of the nursing mother's milk becoming poisonous to the infant after great fright, altogether unreasonable and wholly unexplainable? May not the hunted dog, when pursued and stoned, become rabid on account of the improper action of the cells of the salivary glands?

The discovery of these new bacterial poisons promises materially to alter our views of the nature of disease in many important respects.

Some four years ago, Mitchell and Reichert announced the discovery of poisonous proteids, a globulin and a peptone, in the venom of serpents. At that time, their work was criticised, notably in Germany, on the ground that poisonous proteids were not believed to exist, but there can no longer be any such doubt. In 1888, Christmas obtained from cultures of the staphylococcus aureus a proteid which, when injected into the anterior chamber of the eye or under the skin, caused suppuration. Haskins has isolated from cultures of the bacillus anthracis a poisonous albumose. Very recently Brieger and Fränkel have obtained from cultures of Löffler's bacillus of diphtheria a poisonous albumen which induces the paralysis and other symptoms of the disease, and which, when used in small quantity, produces death, sometimes after a period of twenty or thirty days. The same investigators have shown that similar bodies are produced by the germs of cholera and tetanus, and by Eberth's germ. Baginsky and Stadthagen have found a poisonous proteid in growths of the summer diarrhœa bacterium, discovered by the former. These numerous investigations leave no room for doubt as to the existence and importance of these bodies. No doubt they will prove to be the active agents in some cases of milk- and cheese-poisoning. Indeed, he predicted the discovery of new chemical poisons which would prove to be the active agents in the causation of the catarrhal diarrhœas of infancy. The new poisons which I have isolated from growths of the germs of Booker make good this prediction.

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While the harmful proteids play such an important part in the causation of disease, there are other proteids which serve to protect us against disease. The germicidal properties of the blood have recently attracted much attention. These properties have been shown to reside, not in the white corpuscles or other formed elements, but to be due to the presence and activity of certain proteids.

Thus it will be seen that the study of the proteids of the body, and of those altered by bacterial growths, promises to throw much light upon the causation, prevention, treatment and nature of disease.

We may formulate the conclusions which are apparently justified by the present state of our knowledge in the following propositions:

1. Man is attacked by the infectious diseases either through the alimentary canal or through the blood (or lymph).

2. The gastric juice is a physiological guard against infection by the way of the intestines.

3 Additional guards against infection by the intestines are probably to be found in the absorbing cells of the stomach and intestines.

4. Susceptibility to the intestinal infectious diseases is increased when, for any cause, these physiological guards are defective.

5. All toxicogenic germs are dangerous when introduced into the intestines, and their capability of doing injury lies in their production of chemical poisons.

6. Many of these poisons are proteid in character.

7. These poisonous proteids most probably act by catalysis.

8. In the splitting up of complex molecules into simpler ones heat is liberated and fever manifests itself.

9. The physiological guard against infection through the blood or lymph lies in the germicidal action of the proteids of these fluids.

10. Susceptibility to infection through the blood or lymph is increased by impoverishment of these fluids.

11. We can continue to treat consumption and other systemic diseases by the employment of liberal diet, exercise in the open air, and constitutional remedies, without being unscientific in our practice.

12. Filth, without being the bearer of a specific germ, is a cause of disease.

13. Wherever man pollutes the soil about him, the air

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which he breathes, and the water which he drinks, with his own excretions, there enteric fever will be found.

14. In their causal relation to disease, germs cannot be classified without a knowledge of the chemical changes which they induce.

15. While certain bacterial poisons can result only from the growth of certain germs, other poisons similar to one another in their action, though probably not identical, may result from any one of a number of organisms. In the former case, we have such diseases as anthrax and small-pox, with their practically constant symptoms and well-marked course; in the latter case, we have such diseases as the summer diarrhœa of infancy and enteric fever, with their varying symptoms.

Ptomaines.

Prof. C. P. Frost, of Dartmouth Medical College, read a paper on this subject.

Definition.—Chemical compounds which are basic in character, and are formed during the putrefaction of organic matter. They may be derived from either animal or vegetable decomposition. Some are poisonous—others are not. All the poisonous products of putrefaction are not ptomaines. Some of them resemble the vegetable alkaloids very closely in their effects on the animal organism. They are doubtless formed by the agency of bacteria. Different ptomaines are formed by different bacteria. Their formation depends on the condition in which the putrefying material is placed. They are transition products of decomposition, and may have a very brief existence, so that substances highly poisonous at one hour may be entirely harmless the next hour.

Ptomaines are frequently developed in connection with articles of human food, such as milk and its products, fish, etc. The ptomaine tyrotoxicon is found in ice-cream—mytatotoxicon in mussels.

The study of the ptomaines enables us to understand more fully the manner in which micro-organisms cause disease.

It is now too late to question the relation of germs, microbes, etc., to disease as causation agents. Patient research has established that to be true in regard to many diseases; still the question arises, How do these micro-organisms produce disease? Several theorists have proposed to answer this question. First, it was attributed to deoxidation of the

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blood. Second, the mechanical interference theory—the bacteria causing disease by accumulating in large numbers in important organs, and thus mechanically interrupting their functions. Third, the theory that disease was due to the consumption of the proteids by the bacteria. Fourth, that the bacteria destroy the blood cells, or cause them to disintegrate rapidly. Fifth, that the disease is due to the action of chemical poison, developed by the action of bacteria on the fluids or solids of the body—that is, to the action of ptomaines. This last theory seems at present to be the true one, and capable of being conclusively demonstrated to be correct. Thus we reconcile the views of those who held that disease was due to a chemical poison rather than to a germ, with those who held exclusively to the germ theory.—*Boston Medical and Surgical Journal, August* 14, 1889.

Chloroform the Remedy for the Albuminuria of Pregnancy.

Dr. A. W. Griggs, of Atlanta, President of the Medical Association of Georgia, thinks (*Southern Medical Record, August,* 1890,) that Tyler Smith first pointed out the relation between albuminuria and puerperal eclampsia. This relation exists in a great majority of such cases. True, convulsions do occasionally occur in women of nervous temperament, from morbid reflexes, such as happen from pressure of the fetal head upon perineum or the presence of a clot in utero. Albumen is present in the urine in a large percentage of the cases of eclampsia, and the cure of the albuminuria gives all but absolute immunity against eclampsia. But puerperal eclampsia is easily *prevented* by chloroform without danger to mother or child from the treatment. Make inquiry into the condition of every pregnant patient. Ask her, How far advanced in pregnancy are you? Do the hands and face feel swollen and tight? Are the rings growing too small for the fingers? Do you feel that you are generally swollen over the whole body? Do you suffer from pain over the crown of the head? Do you have any perversion of vision? Do you have any trouble in your speech? Is there any diminution in the amount of urine secreted? If these questions, or only a few of them, are answered affirmatively, test the urine for the convincing proof of the existence of albuminuria, and he is almost sure to find it. It does not matter in what stage of utero-gestation it may be, eclampsia may be fully expected, unless the morbid processes which are going on be corrected.

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Begin treatment as soon as the case is made out; and if you have a month's time, you will be apt to succeed; two months will usually be ample. *Administer chloroform* per orem in doses suited to circumstances as to the time you may have for treatment, or as to the urgency of the symptoms. If we have six or eight weeks, begin with twelve drops, and gradually increase up to fifteen or twenty. The nearer the term, the larger the dose should be; though it is generally better to begin with a small quantity and increase it as may be necessary. These doses are taken before each regular meal-time, or three times a day, and also at midnight. The drug is dropped into two tablespoonfuls of water, or more if desired. Hold the breath and swallow promptly, immediately exhaling a portion of air from the lungs, so as to blow off the fumes of the medicine. In very urgent cases, he has given much larger doses. One case, on the very border of eclampsia, had about a week to go before labor, and was suffering with pain over the crown of the head. She was having one shock after another as if from a powerful battery. Twenty-five drops of chloroform were administered, and fifteen were given in a half hour afterward, and the dose was repeated every half hour until she became quiet and composed. The urine, which had been scanty, rapidly increased in quantity, and great relief was afforded. The chloroform was continued in twenty-five drop doses four times daily until she was confined, which ordeal she passed through without an unfavorable symptom. We have treated a number of such cases in the last fifteen or twenty years with entire success. Of course they were not all so bad, and we had more time to devote to their management. We not only gave the medicine, but prescribed the adoption of the best hygienic regulations.

During the treatment, the urine should be examined at least once a week, that we may know how to regulate the dose of the chloroform. The treatment should be persevered in as long as albumen is in the urine. A good rule is to increase the chloroform if the albumen is increasing, and *vice versa*. Do not crowd the patient too freely. Digestion will be improved under the use of the chloroform, and the anasarca will be relieved.

It has been claimed that Dr. H. V. M. Miller first instituted this treatment. Dr. Griggs does not know when he first used it, nor how he was led to its use. I have tried to get up all that has been written on this subject, but find but little in medical literature. Dr. John G. Westmoreland and

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I used this treatment many years ago, but never made any claim of priority.

Some Recent Therapeutic Observations About Epilepsy.

Borax in Epilepsy.—Dr. Stewart, of Glamorgan County Asylum, related cases before the Cardiff Medical Society, illustrating the value of *borax in epilepsy*. 1st. A girl, aged 13, had had epileptic seizures from birth, varying from two to twelve per day, and chiefly by night. She had been under treatment repeatedly, but without benefit. Without treatment, the fits during the first week were 26 in number; *under borax*, they were reduced to 24 in the second and 8 in the third week. After an interval free from fits of sixteen days, four occurred on two successive nights; then, after another interval of nine days, a single fit took place, and since that there has been no recurrence of fits, a clear interval of over a month. 2nd. Patient began to suffer from nocturnal epilepsy at 18, and came under treatment five years afterward. The case was complicated by serious cardiac disease and stenosis of the mitral orifice. Without treatment, the average monthly number of fits was 101; *under borax*, this was reduced to twenty in the first month, seven in second, one in third, five in fourth, none in fifth, and one in sixth. 3rd. This patient had whooping-cough at seven, followed by left hemiplegia, imbecility, and epilepsy. The average number of fits a week, when no special treatment was employed, was 3.5, and bromide failed to effect any reduction; after two-and-a-half year's treatment the weekly average had risen to sixteen. *Under borax* the weekly average during first month was reduced to 15.5, and during second month to 11.5. The diminution took place chiefly in the nocturnal seizures. In 4th, 5th, and 7th, in which the fits occurred both by day and night, bromide exercised a decided influence upon the diurnal seizures, leaving the nocturnal practically unaltered; and in these benefit was experienced from the combined use of bromide and borax, three doses of the former during the day and one single dose of the latter at bed-time. 6th. This patient, epileptic and imbecile from birth, came under treatment at 35. The fits were of the nocturnal type, were uninfluenced by bromide, and were slightly diminished by borax.

Dr. Stewart concluded that borax exercised a peculiar influence over nocturnal seizures, and that it was in cases where the fits were entirely of that kind that the greatest good might be expected; that bromide, on the other hand,

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exerted a more powerful influence over diurnal seizures, and that, in cases characterized by both day and night fits, a combination of these two remedies would be productive of most benefit.—*Brit. M. Jour., April* 19.

Bromide of Gold in Epilepsy.—Dr. Danillo prescribed bromide of gold in eight cases of epilepsy—at first four pills, each containing one-fifth grain, and afterwards from twelve to sixteen pills per diem. No symptoms of bromism, with exception of some anæsthesia of mouth, were produced. In five cases there was more or less improvement; in one of these the fits became reduced in degree to the level of petit mal; in another, a girl of fourteen, the fits, which formerly occurred once or twice a week, were completely stopped, and four months afterwards there had been no return; in three cases the fits became weaker and less frequent. Over the remaining three of the eight cases the bromide of gold appeared to exert no influence. Dr. Shcherbak recently published in *Vrach* an account of some experiments made to ascertain the proper dose of bromide of gold, and also to compare the action with that of other better known bromides. The drug was administered in three ways—by intravenous injection, by hypodermic injection, and through the œsophageal tube into the stomach. Artificially induced epileptiform attacks could be averted by intravenous injection of 0.003 gramme per kilogramme of body weight, larger doses being needed in hypodermic administration (viz. 0.09 to 0.16 gramme), whilst by the stomach the attacks were not entirely prevented unless from 0.1 to 0.2 gramme per kilogramme of body weight was employed. On the whole, it appeared that bromide of gold is decidedly more active weight for weight than the more commonly used bromides, probably in the proportion of 10 to 1.—*Lancet, April* 19.

Acetanilid in Epilepsy.—Dr. Theodore Diller, of Danville, has been using *acetanilid in epilepsy* in nine cases in which bromides and other treatment had previously been employed. In all the cases in which the drug was given continuously, there was noted a reduction in the number of fits ranging from 25 to 75 per cent., as compared with other months during which the patients were on bromide and tonic treatment alternatively. The remedy was in all cases well borne, producing no apparent mental or physical depression, this forming a marked contrast to the depressant effects noted after a course of bromides. No skin eruption was produced. In spite of these results, however, he be-

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lieves that in any given case, in which a great number of fits are occurring, and where it is desirable to control them as soon as possible, bromides would be of far more value than acetanilid. It would appear that the beneficial effects of acetanilid were most marked only after the drug had been employed for over three months. In two cases no improvement followed the use of acetanilid.—*Lancet.*

[Dr. Dujardin-Beaumetz proposed the use use of *exalgine in epilepsy*, and Déferine is now testing the new drug at the Bicetre].

Phosphide of Zinc in Mild Epilepsy.—In the milder form of epilepsy phosphide of zinc is of positive value. A boy had been under treatment for over a year. When first seen the seizures were frequent, sometimes two occurring in one day. He was ordered one-tenth grain of phosphide of zinc three times a day, which was gradually increased to one-sixth grain. Under this treatment alone the seizures entirely ceased for six months, but returned when the medicine was temporarily suspended. Under continuous treatment again he has had no return for six months. A prominent business-man in the midst of an active business career, found that his memory was failing rapidly, and no reason could be found to account for it, until he accidently complained of occasionally seeing objects as if greatly reduced in size. Dr. Rex, recognizing this as one of the forms of visual epileptic aura, suspected that his patient was suffering from nocturnal epilepsy, which usually takes the milder form. Careful watching at night showed that such was the fact. He was treated with phosphide of zinc for thirteen months with great benefit and entire relief; but after a period of three weeks without medicine, he had a seizure. He was immediately put back on treatment, which was persisted in for three years, and he now remains cured after a lapse of six years.—*Dr. Rex, Archives of Ped.; Med. World*, August, 1890.

Pilocarpine Almost a Specific for Jaundice.

Dr. Witkowski considers pilocarpine almost a specific for jaundice, and if the disease continues after from ten to fifteen days' treatment, a malignant growth may be suspected. The mode of administering the drug is by hypodermic injection of one-sixth grain (0.01 gramme) once or twice daily. Dr. Witkowski has succeeded in over thirty cases, and has only failed to derive benefit in cases of malignant disease of the liver.—*Gaz. Thérap.; Provin. Med. Jour.*, June, 2; *Satel.*, August, 1890.

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thisis Treated by Inhalations of Sulphurous Anhydride.

Dr. George F. Keene, of Howard, R. I., reports (*Trans. R. Med. Soc.*, 1889,) the case of a man, age 40, of fair family story, who had had a cough for a year. He caught a "se-re cold" from lying out one night on the wet grass, and gan to cough severely and expectorate large quantities of ucus every morning. He lost appetite, flesh and strength pidly for five or six weeks, when he was sent to the alms-use June 6th, 1889, apparently in the last stages of con-mption—weighing scarcely 100 pounds, so weak he could rdly walk, and speaking only in a whisper. It was as promising a case as could well be found. There were onchial respiration and dullness on percussion over angles both scapulæ; fine moist râles almost everywhere over per part of left lung, and in the right interscapular space. here were coarse, bubbling râles about an inch below an-e of left scapula, with amphoric respiration. There was eat dyspnœa on exertion, hectic on both cheeks—more arked on the left. Pulse, 130; temperature, 102.5° F.

He was put in a room, where a handful of sulphur, wet th alcohol, was ignited, and instructed to remain in the om inhaling the sulphurous fumes as long as possible. his he did for nearly four hours, and was nearly asphyxi-ed. This treatment was continued daily, together with 15 ains of tannic acid internally, three times daily. In ten ys he could speak aloud, and showed signs of improve-ent which continued steadily until this report (December th), when he was nearly well, robust in appearance, works ery day, and weighs 135 pounds. By *August* 12th, the spiratory murmur was clear over the whole of the right ck. No dutlness was detected, and no râles even on forced spiration. Left lung slightly improved—no coarse râles; ly fine ones persist at the angle of the scapula. Still had ne cough, but no night-sweats. *December* 3rd.—Left side still not so well-nourished as the right—with slight dull-ss, bronchophony, and a few fine, moist râles at the angle the left scapula. Right side normal.

umine, the New Local Anæsthetic.

Described by Dr. John Reid, in the *London Lancet*, comes om Port Germain, in South Australia, is the alkaloid pre-red from the milky juice of euphorbia drummondii. action differs from cocaine in that it is a purely *sensory* ralyzant, while cocaine acts on *both* sensory and motor rves. Injected into the legs of cats, it caused general

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dullness and marked impairment of all forms of sensibility. Anæsthesia was most marked when placed on the tongue, nostrils or hand. It does not act on the pupil, nor is any constitutional effect observed by small doses internally. Four minims of a four per cent. solution, hypodermatically used, relieves sciatica. A great future is predicted for drumine in nervous and cerebral diseases. Experiments are as yet imperfect, but are in progress.—*Pacif. Rec. Med. and Surg., July*, 1890.

A Regional Study of Tumors.

Dr. W. L. Rodman, of Louisville, read a most excellent paper at the May (1890) meeting of the Kentucky State Medical Society. There is not, strange to say, a treatise upon this subject in any language. Nor has he after diligent search, been able to find even so much as an article in a medical journal upon the subject. It is true that one may blindly predict that a tumor of the scalp is a sebaceous cyst, that one growing from the inner condyle of the femur is a sarcoma, and nearly always he will turn out right. The same would, to a less extent, be true of other regions prolific in morbid growths, if proper attention was given them.

To begin with the

Scalp.—By far the most common tumors are the three forms of cystic tumors, viz., (1) cutaneous sebaceous cysts, (2) congenital dermoid cysts, (3) serous cysts.

1. The *first* is much the commonest, and is called a "wen." They are single or multiple. Prof. Gross saw a man with more than two hundred. They vary in size from a buckshot to an orange, and are more common in women than in men. Unquestionably they are hereditary, but are more common after thirty years of age. The scalp over these tumors is either partially or wholly bald. Three-fourths of all sebaceous tumors are on the head and face.

Congenital dermoid cysts are generally about the eyebrow, at the outer angle of the orbit, and also found over the frontal bone, behind the ear, and over the anterior fontanelle. In the last situation a cyst of this kind has been mistaken for a meningocele cut off from the cranial cavity. They are deeply placed, usually attached to the periosteum, and by prolonged pressure may indent or even perforate the bone—especially if situated at the outer angle nf the orbit.

3. Serous cysts are extremely uncommon, and are, according to Treves, either congenital, or formed from extravasated blood, or from a meningocele whose connection with the

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anial cavity has been cut off. Billroth saw a cyst of this nd as large as the patient's head.

Next in frequency are various forms of vascular tumors nevi. They are by far more common here than in any her situation. According to Haineke arterial angiomata e found only in this region. Another rare form of vascur tumor is the venous, which communicates at times one, again by several openings through the skull with e superior longitudinal sinus. Fortunately, they are exemely rare, and found in the middle line over the longidinal sinus. Surgical interference is out of the question, less it be to make systematic compression.

The occasional existence of a meningocele or encephaloe is not to be forgotten. The most common situation is the point where the four centres of ossification of the ocpital bone come together. They also occur at the anterior ntanelle, above the nose, and in the parietal regions.

Solid tumors of the scalp are uncommon. Lipoma, fibroa, and pachydermatocele are very uncommon. Sarcoma d carcinoma occur more frequently, but they too are rare. The epithelial variety is the usual form of cancer. One se of scirrhous is reported. The bones of the skull may the seat of ivory exostoses, ordinary or syphilitic. The rmer are more likely to occur on the out and the latter on e inner table. Sarcomata also grow from the bones, but, a rule, begin in the pericranium.

Parotid Gland Tumors are not uncommon. About 50 per nt. of all tumors of this gland are of a cartilaginous nare. The cancerous tumors are next in frequency, comising 26.78 per cent. Specimens of mixed neoplasms are ry frequent in this situation. The benign tumors which mprise 67.04 per cent. are movable, grow in early and iddle life; the skin over them is not discolored, have lite tendency to cause pain, and do not cause paralysis of the cial nerve. The converse is true of the malignant growths. Str William Fergusson, says: "If it were evident that e tumor slid freely over the adjacent textures, I should ot hesitate about using the knife, whatever might be the lk of the disease; . . . but if the tumor be fixed, its nits not clearly defined, or an attempt to move it caused in, I should not readily be induced to use the knife, hower small the mass might be."

Submaxillary Gland.—Enchondroma, fibroma, adenoma, mphoma, and cysts, are the benign growths most likely to e met with in this gland. Sir James Paget asserts that en-

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chondromas are not so common in this gland as they are in the parotid—others claim that they are more so.

Of malignant neoplasms we find sarcomas, lympho-sarcomas, and carcinomas, the latter being rare and usually of the scirrhous variety.

Sublingual Gland.—The only growth which frequently affects this gland is "*ranula.*" Epithelioma is the only form of malignant disease, and is infrequent. Calculous formations are rare.

Auricle.—Tumors in this situation are the fibro-elastic or keloid, fatty, sebaceous, hematoma auris, nevus, sarcoma, and epithelioma. By far the most common is the fibro-elastic. It grows from the lobule of the ear, varies in size from a pea to a hen's egg, is very hard and dense, of slow growth, most common in negresses, and is undoubtedly mostly due to the irritation of heavy and irritating ear-rings; hence it is uncommon in men. Fatty tumor is very rare; so are sebaceous cysts, and also sarcoma.

Hematoma usually begins in the concha and spreads over the auricle, and is almost peculiar to the insane. Nevus is very rare. Epithelioma may occur in elderly persons.

Lips.—Tumors are common. The most frequent is the small mucous cyst which is almost peculiar to the lower lip. The different forms of vascular tumors are almost entirely limited to the upper lip.

Epithelioma is common. It is nearly always in the lower lip. Epithelioma is by far more frequent in males. It is rarely seen under forty-five, being pre-eminently an affection of advanced age. The theory that it is caused by smoking short-stem pipes is perhaps untenable.

Mammary Gland.—S. W. Gross has made the simplest and the most rational classification of these neoplasms, based upon a sound anatomical and clinical foundation. Of benign tumors, we find fibroma, myxoma, adenoma and cysts, retension, and of new formation. Lipoma and enchondroma occur in the para-mammary tissue, but not in the gland itself, and will not be considered. Of malignant growths, there are sarcomata and carcinomata. Statistics show that we have 81.66 per cent. cancerous, 8.75 per cent. sarcomas, 7.38 per cent. fibromas, 0.30 per cent. adenomas, and 1.84 per cent. cysts—or over 90 per cent. malignant, and 9.52 per cent. benign. Non-carcinomatous growths occur, on an average, at the thirty-third year; only 30.37 per cent. develop after forty. They develop during the activity of the gland;

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15.55 per cent. appear before the twentieth year, and 5.18 per cent. before menstruation.

Carcinomatous tumors develop, on an average, at the forty-eighth year, and are never met with before the twentieth year. They occur with the decline in function or atrophy of the breast.

The only tumors before the sixteenth year are fibromas and sarcomas, the former occurring six times as frequently as the latter. "Structural perfection of the mamma renders it most obnoxious to fibroma, sarcoma, and adenoma, while atrophy or decay predisposes it to myxoma and carcinoma."

Carcinomas are usually at the upper and outer margin of the gland, and about the nipple. Non-carcinomatous growths are generally at the upper and inner margin of the breast, and but rarely grow around the nipple.

Axilla.—Abscesses are frequently in this locality, also tuberculosis of the lymphatic glands. Aneurisms are not uncommon, surgeons have mistaken them for neoplasms. The result was fatal in every instance save one. Then again the subclavian has been ligated for a supposed aneurism, when the real trouble was a pulsating sarcoma.

The tumors met with in this situation are fatty, cystic, sarcomatous, and carcinomatous. The malignant are more common than the benign. Fatty tumors sometimes attain an enormous size.

Cystic tumors are frequently congenital, contents serous and coagulable. Notwithstanding the abundance of hairs in this situation, sebaceous cysts are almost if not entirely unknown.

Sarcomas originate in the connective tissues, and also from the lymphatic glands. At first freely movable, they soon become fixed. The superficial veins are prominent—tendency to ulceration is marked. "Carcinoma of the axilla is always the result of secondary involvement in connection with carcinoma of the breast." Erichsen recognizes the fact that scirrhous cancer may begin as a primary affection under the pectoral muscle or in the axilla.

The attachments of malignant tumors in this situation are deep, and not infrequently the sheaths of the blood-vessels are adherent to the growth.

Shoulder.—Tumors in this region may be divided into two classes, those beginning in the soft tissues around the joint, and those growing from the humerus, scapula, and

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clavicle. The former are almost invariably benign, the latter as certainly malignant.

Of benign tumors growing in the soft tissues we most generally find chondromas, fibromas, and lipomas. The former acquire an enormous size, often weighing twenty-five pounds, and, in rare instances, fifty. Fatty tumors are common, and may attain considerable volume. They are not so easily enucleated as in other situations, being at times quite adherent to the surrounding tissues. Cysts and erectile tumors are very rare; the latter, when they occur, are aneurismal or venous.

The one tumor which often springs from the bones of the shoulder is the small, round-celled or encephaloid sarcoma. It is exceedingly malignant. The points of diagnosis are rapid growth, apparent fluctuation, and prominence of the superficial veins. Of this frightful disease Dr. Rodman has seen two instances, both in females. Spontaneous fracture of the bone is not uncommon.

Enchondroma sometimes grows from the upper end of the humerus, beginning either centrally or subperiosteally. This, in fact, is one of the favorite seats of the chondroma. It is likely to undergo sarcomatous degeneration.

Abdominal Walls.—Tumors of these walls are usually fatty, fibroid, cystic, or sarcomatous. They may be superficial to or beneath the muscle—rarely between them. Those superficial to the muscles are, as a rule, fatty. Sometimes these tumors, when situated near the middle line, may communicate by a small opening with the abdominal cavity. The possibility of this should be remembered. The slow and painless growth, lobulation, etc., render the diagnosis sufficiently easy. In 1862, Nélaton described a fibrous tumor which he had, in fifteen instances, found growing in the iliac fossa. The tumor was dense and inelastic, usually situated just above Poupart's ligament, and attached to the anterior superior spinous process of the ilium, or thereabouts, by a dense fibrous band, They are beneath the muscles, between the peritoneum and the iliac fascia.

Cystic tumors in this situation are rare. When existing, they are deeply placed just external to the peritoneum. They are supposed to develop from the fetal urachus. They contain a serous fluid and attain a large size. They may simulate ascites.

Sarcoma is uncommon. In the few cases where it has been observed, it is rather deeply placed, either between the planes of muscles or beneath them. Being malignant in

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character, they frequently form adhesions to the abdominal viscera.

In the removal of all tumors of the abdominal wall, more especially the deeper ones, as small an incision as practicable should be made, the muscles carefully stitched so as to prevent ventral hernia.

Back.—Tumors of the back are usually benign. Fatty and fibrous are more frequent than others. Cystic tumors are rare. The peculiarity of both fatty and fibrous tumors of the back is that they are large and pendulous. The former grow from the superficial connective tissues; the latter from the deeper ones beneath the muscles. Sarcomas are rather uncommon, and when they do occur, are apt to grow in the interscapular region. Cancer is still more uncommon. When it exists, it is of the epitheliomatous nature, and may spread over a large extent of surface.

Groin.—Of tumors in this region the fatty, fibrous, cystic, and sarcomatous, are the most common. Varix of the saphenous vein at its opening into the femoral may also occur; so may aneurisms of different kinds. Fatty tumors may begin above in the abdominal wall, and descend into the groin. They are usually large and pendulous, and easily enucleated with little hæmorrhage. The fibrous fibrous tumors are, as a rule, more deeply attached, and consequently difficult of removal. They may be attached to the vessels. The three different classes of cystic tumors liable to occur in the groin: (1) Retention cysts, as the sebaceous, which are rare. (2) Exudation cysts, as the enlargement of the bursa lying between the anterior surface of the capsule of the hip and the posterior surface of the psoas and iliacus muscles, are by far more common, and at times undergoes great enlargement. (3) Cysts of new formation, either serous or sanguineous.

There are other "swellings" which are even more common than the tumors named: Acute and chronic abscesses which point either above or below Poupart's ligament, hydrocele of the cord, hernia, undescended testicle, aneurisms, tuberculosis of the lymphatic glands, etc. A cystic or solid tumor, situated over the course of the vessels, will have an impulse imparted to it, and the tumor may be mistaken for an aneurism. Extreme caution is necessary for the correct diagnosis and removal of growths in this region.

Scrotum.—Sebaceous tumors are usually multiple. They vary in size from a pea to a hickory-nut. Other cystic tumors are very uncommon. As a rule, they are small and

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multiple. Dermoid cysts containing bone, teeth, cartilage, etc., are congenital.

Lipomas are rare. When present, they are usually of small size, and feel like a third testicle. Kimball reports a growth of this kind weighing two pounds. Fibrous tumors are uncommon. They occur after middle life, and attain a large size. Elephantiasis of the scrotum is uncommon in this country. Carcinoma of the scrotum is usually of the epithelial variety. It is so common in chimney-sweeps that it is often called the "chimney-sweeper's cancer." Sarcoma is rare.

The Testicle, like the female breast, is frequently the seat of morbid growths. The tumors commonly found are cystic degeneration, enchondroma, sarcoma, and carcinoma. Myomata, lipomata, and fibromata, are reported, but are very rare. Given a tumor of the testicle, the chances are that it is malignant. Simple cystic degeneration sometimes, though rarely, occurs. The cysts are multiple, and generally of great number, varying in size from a pin's head to a walnut. Contents watery or gelatinous. This is the "hydated testis" of Sir Astley Cooper. Cystic disease sometimes co-exists with sarcoma, chondroma, and carcinoma.

Enchondroma.—The parotid and submaxillary glands are the only structures of the body more often the seat of this tumor than the testicle. It is liable to undergo sarcomatous change. It also co-exists with cystic disease.

Tuberculosis generally occurs in young subjects with evidences of tuberculosis elsewhere. Rarely is it limited to the testicle. It almost invariably affects the epididymis, and not the testis proper.

Sarcoma is the most common of all tumors. It is uusally of the small, round-celled variety, the encephaloid sarcoma. It is impossible to diagnosticate this growth from the encephaloid carcinoma without the aid of the microscope. S. W. Gross says that it affects younger subjects, even very young children, grows more rapidly, attains a greater volume, is more apt to invade the epididymis, more apt to cause enlargement of the inguinal lymphatic glands, but less apt to invade the cord than carcinoma.

Carcinoma.—Most authors agree that the only variety found in the testicle is the encephaloid—the old fungus hematodes. It is most common about forty years of age, and is said never to occur in impubic subjects. It is invariably

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unilateral. Bryant and Holmes admit the possibility of scirrhus.

Tumors of the perineum must be extremely rare, as Dr. R. finds no mention of them in the standard works. The only tumor he has ever met with in this region was a fibroma of many years' duration, in a man sixty-seven years of age. It was the size of an orange and had grown very slowly. Six months before its removal it had taken on a more rapid growth, and the skin over its surface became discolored. A microscopical examination showed a limited amount of sarcomatous degeneration, the cells being of the small spindle variety. It was removed by Dr. Pusey two years ago, and has not returned.

The Penis is not often the seat of neoplasms. Benign growths, both cystic and solid, may occur, but are very rare. By far the most common growth is the carcinoma; some claim that the only form of cancer to which the penis is liable is the epithelioma. It begins as a small wart or crack either upon the prepuce or glans penis, soon ulcerates, and can be diagnosticated by the offensive sanious discharge, involvement of inguinal glands, pain, age of patient, etc. It is more common in elderly subjects; it is uncommon under thirty-five. Erichsen and Corte have seen scirrhus of the penis, situated in the sulcus behind the glans. Sarcoma is extremely infrequent. Dr. W. G. Porter of Philadelphia, reported a case beginning at the hase of the penis of a negro aged forty-four years.

Nates.—Cysts are common, and sometimes congenital. When congenital, they may be so large as to require puncture, so as to permit delivery of the child. Fatty, myxomatous, fibrous and sarcomatous growths are solid tumors usually found. Myxoma is perhaps the most frequent of all. It may assume the type of myxoma-lipomatodes. All of these tumors may begin on the outside of the pelvis and project into it through the great sciatic foramen, or begin on the inside and pass out. These tumors are deeply placed and their diagnoses before removal difficult.

Popliteal Space.—Cystic tumors of this region are classified as follows: 1. Enlargement of some one of the natural bursæ. 2. Synovial cysts, caused by hernial protrusion of the synovial membrane. 3. Accidental cysts, serous or sanguineous.

The first is the most common. Enlargement of the bursa situated between the inner head of the gastrocnemius mus-

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cle and femur is the largest and most common of these tumors. Next in the order of frequency is the one situated between the tendon of the semi-membranous and its insertion into the tibia. The bursæ on the outside of this space are smaller and less often enlarged.

Of solid tumors in this space we have sarcomas, fibromas and lipomas. Sarcoma is most frequent, frequently pulsates, and for this reason the femoral artery has been tied for relief of a supposed aneurism. The benign tumors are rare. Fatty tumors here often assume the form of myxoma-lipomatodes. The frequent appearance of popliteal aneurisms and deep-seated abscesses in this region should make the surgeon extremely cautious in dealing with any tumor. Dupuytren, Desault, and others, have opened aneurisms in this situation under the impression that they were abscesses. One such mistake necessitated ligation of the femoral artery.

We turn to the *bones* of this region. The lower end of the femur, the condyles, and the upper end of the tibia are frequently the seat of enchondromas and sarcomas. Both of these diseases are more likely to grow from the inner aspect of the joint, the classical site of the sarcoma being internal condyle of the femur.

Hands and Fingers.—Enchondromas, ganglions, simple and compound, fibromas, lipomas, exostoses, sarcomas, and carcinomas are met with on the hands and fingers. Enchondroma is by far the most common. They are usually multiple, growing from the thumb and fingers, and producing great deformity. Fibromas are less common. They, too, are as a rule multiple. Ganglions are usually situated on the back of the wrist and hand, over the extensor tendons. Fatty tumors are extremely rare, and when they do occur are situated deeply in the palm of the hand. Exostoses are uncommon. Both forms of malignant disease, sarcoma and carcinoma, are rare. Of the malignant growths, epithelioma is the most common.

Foot and Toes.—The neoplasms of the foot are lipoma, fibroma, ganglions, epithelioma and sarcoma. Fatty tumors are rare, and when found are usually in the sole of the foot. Fibromas are also rare and generally situated at the posterior part of the sole, where they interfere very much with walking. Ganglions are more common, and are situated over the extensor tendons on the dorsum. Epithelioma is more common than sarcoma, though both are rare.

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Proceedings of Societies, Boards, etc

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

[J. W. Henson, M. D., Reporter.]

August 12th, 1890.—Dr. W. W. Parker, President, in the Chair.

The President, Dr. Parker, read a

Report of a Post-Mortem in a Case of Osteo-Sarcoma.

On January 1st last he saw Mrs. C., aged 24 years (mother of one child of 3 years), who had been suffering about two years with a tumor in the right groin. It was nearly the size of her fist, hard and painful on pressure. It appeared soon after the birth of her child, and was thought by the doctor then in attendance to be an enlarged gland. Not much attention was paid to it then, as it was not very painful. It grew very gradually, and after two or three months she consulted a surgeon who pronounced it "cancer." This diagnosis shocked her so that she at once took to her bed and commenced taking opium. She remained in bed three months in the greatest distress. She finally took heart and got up and attended to her household duties. Several doctors saw her. The tumor was aspirated, and nothing but blood escaped. Electricity was used on the tumor for some time, and seemed to give great relief, but did not reduce its size. She still continued to take opium.

When Dr. Parker first saw her, she was cheerful, and going about the house, and often on the street, though much emaciated. The right leg (the right side being the one affected) was not larger than her arm in health—indeed, not so large. The muscles were shrunken and flabby, yet she walked quite well and fast—with a slight limp. She had never been leeched or blistered. The leeching was tried, but no good was done; but small blisters, often repeated, gave great relief. There was a distinct aneurismal thrill in the tumor, which *now* filled the iliac fossa, and was as large as the doctor's fist, but oblique in shape. The thrill proceeded from an artery running obliquely across the tumor outward.

Dr. Parker called in Dr. Isaiah H. White to see if this artery might not be tied, thinking it might be feeding the tumor. He thought that at least an exploratory incision would be justifiable, provided the lady passed safely through her confinement. She had now been pregnant six months.

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She was safely delivered at term of a small but healthy infant—chloroform, whiskey and ergot being used during the labor.

Six weeks after her confinement, she rode out (against my advice), and came home in great pain, and went to bed. So great was the pain that it was necessary to administer chloroform, as opium would not give relief. She took immense quantities of the former. He forgot to say that about three weeks after her confinement the pain entirely disappeared (strange to say). She then stopped the opium and chloroform.

Her appetite, too, became enormous. She ate six hearty meals a day, and would awake at daybreak and demand her breakfast. Her appetite reminded him of some convalescents from typhoid fever. It was surprising to see how rapidly her strength and flesh increased. Her spirits rose to the highest pitch. She was the happiest woman the doctor ever saw.

But in exactly 15 days the pain returned with great violence, as stated above in connection with the drive after her confinement.

Dr. White again saw her with me with a view to exploring the tumor. We found it had increased in size since her confinement—had extended downward, and the arterial thrill was now more distinct.

After taking into account the uncertainty of the diagnosis, and that it would be necessary to enter the peritoneal cavity in order to thoroughly explore the tumor, both doctors concluded it would not be wise to attempt an operation. The pain increased to such an extent that she sometimes had to take two ounces [?] of McMunn's elixir of opium every hour.

From the time she rode out until her death (July 27th), she took, in addition to immense quantities of opium, *nineteen pounds* of chloroform. Much of this was wasted, as she often took it herself. Her death was sudden. Upon rising to vomit, she fell upon her pillow and expired without a struggle.

Thirty-six hours after death, in company with Dr. White and Dr. J. Michaux, who had at one time attended her, Dr. Parker laid open the tumor by making two incisions—one over the entire length of the growth downwards and inwards; and a second (small one) across the first, and running inwards. The muscles covering the tumor looked healthy. Upon reaching the mass, he found it impossible,

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on passing his hand inwards, to dislodge it from the brim of the pelvis. It was bound down to the brim as far as the pubis by a dense fibrous tissue. He then withdrew his hand, and passed it outward and backward along the crest of the ilium, coming in contact with an immense amount of diseased bone, which extended backward nearly to the sacrum. In some places he could push his finger through the bone, which was honey-combed. He made an incision into the tumor, and found part of it soft—not exactly medullary, but not at all scirrhous—and of the color of pale muscular tissue.

As the origin of the disease was now plain, he did not remove the whole tumor. It evidently began in the bone or periosteum. The exciting cause may have been the lady's striking her right groin against the edge of a table about four years before the trouble began to manifest itself. The accident produced great pain, which lasted for some time.

Dr. Parker said that he read quite a lengthy paper before the Medical Society of Virginia two years ago against the habit of some excellent surgeons who think it their duty to be frank with these patients, and in this paper he took the ground that their course was always unwise in the case of cancer.

This patient was a beautiful woman, full of life and energy, and lost one or two years of comparative happiness by the announcement of the surgeon that the growth was a cancer.

One gratifying result of this post-mortem was that it relieved the minds of the husband and mother of the idea that the patient had been neglected or the case mismanaged. It is doubtful if any operation at any time would have been beneficial in its results.

Dr. Michaux had attended this woman in her first confinement, and had her in charge when the tumor first developed. Two-and-a-half years ago, she came to him complaining of pains in the right iliac region before the appearance of the growth. He examined her per vaginam, and by means of bi-manual palpation, suspecting some ovarian trouble, but found no enlargement of that organ or other evidences of disease.

The pains from the beginning came on in paroxysms, which, as time and the case advanced, grew more violent, and the intervals became shorter. Then a small nodule appeared in the right iliac region—growing, but not rapidly. The *length* of the pains increased too. Thinking to learn

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more, he used the exploring needle. He found a very dense tumor—a few drops of blood (nothing else) escaping. He declined to operate, thinking the growth malignant. Being invited by Dr. Parker, he attended the post-mortem, and was still more inclined to think it malignant.

Adenoma of the Mammary Gland.

Dr. J. N. Upshur reported the case of a lady whom he had delivered in September last. She had a good labor and a satisfactory "getting up"—except that she had a slight continued fever during the last two weeks of her confinement. She also suffered from sore nipples, for which he had used lead nipple shields. At the seventh week he was called again to see the patient, who was suffering from supposed mammary abscess due, her mother thought, to bruising from the nipple shields. The doctor thought this impossible, as the metal was too soft. After poulticing, he gave chloroform. Fluctuation being distinct as he had ever felt, he lanced the breast. To his surprise only a little sanguinolent matter was discharged, and the tissue creaked under the knife like a potato. The absence of pus and the peculiar feel on cutting were both very striking features. The pain and throbbing subsided, and the part not discharging, the poulticing was stopped after a while. The pain and throbbing recommencing, the doctor went through the same process of poulticing and lancing with the same experience, except there was this time some pus. Later still he repeated the above treatment, and this time, upon continuing the poulticing, the place discharged more pus than it had done at all. He stated to the patient's mother that this was not ordinary mammary abscess, but an adenoma, being benign at the time, but that it might in the future degenerate so as to need surgical interference.

After this, under the influence of tonics, the patient's general health improved. He used potassium iodide and fluid extract gentian internally, and five per cent. oleate mercury locally; but not succeeding in reducing the tumor, after fair trial, the treatment was discontinued, and the patient urgently advised not to rub or handle the growth. She was now put on the the syrup of lactophosphate of lime with very decided improvement in her general health. The baby had not been weaned from this breast because of the free flow of milk from the inferior part of the gland, and the fear of abscess in that location; but so soon as the milk could be dried up, the weaning from this breast was done. When the patient

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passed from under Dr. Upshur's care, she was looking as well as he had ever seen her.

She had subsequently an attack of *la grippe*, and a few weeks later, cholera morbus.

The said patient is now in Dr. Hugh M. Taylor's hands, and he (Dr. Upshur) thought the subsequent history of the case would be of interest to the Academy. He had erred (said the doctor) in two points:

First. He believed that if he had stated frankly the probable outcome of the trouble and had advised excision, the woman's life would have been either saved or prolonged.

Secondly. In the light of subsequent history, he believed he erred in lancing the breast, as no good had resulted.

This was a case which illustrated the importance of frankness and early excision. He thought the latter very important in the case of suspicious growths.

Scirrhus of the Mammary Gland.

Dr. Upshur also referred to an old lady of sixty. She had in one mammary gland an irregular hard lump, but her former physician (now dead) advised her to let it alone, since at that time it gave her no trouble.

Sometime ago she sent for Dr. Upshur, and showed him the lump. She complained of trouble in using her right arm, and tenderness of the breast. There were darting pains and retracted nipple. The lump was hard and irregular, though not adherent to the chest wall, and presented symptoms of scirrhus. He advised removal. She could not convince herself and friends of the nature of the trouble. He told her frankly if she waited too long it would be too late.

Dr. Parker thought Dr Upshur wrong in lancing in the first case he reported. This should never be done unless there was absolutely distinct fluctuation. He was suspicious of breast tumors anyway unless he could be absolutely sure of abscess. He thought Dr. Upshur also wrong in telling the patient the diagnosis in the case of malignancy. He had as lief shoot a woman as to tell her she was cancerous. Tell her friends always but not the patient. Thousands and thousands were made miserable by this practice. He was sustained, said the doctor, by Mr. Locke.

Dr. Upshur stated that the fluctuation was positive and unmistakable. He believed he would be in error to state that fluctuation and the peculiar feeling in cutting, before described, when taken together were characteristic of malignancy.

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Dr. Hugh M. Taylor said the history of the first case reported by Dr. Upshur had been given him just about as the doctor had related it. He refused to say anything about the case, as the patient and friends being very sensitive, preferred that it should not be spoken of.

The Diagnosis of Scirrhus of Rectum in a Child of 13 Years Confirmed.

Dr. Michaux referred to the case of scirrhus of the rectum in a child of 13 years, reported by him at the meeting of this body July 8th. Since that report he called Dr. J. S. D. Cullen in consultation, who confirmed his (Dr. Michaux's) diagnosis. The growth finally closed up the calibre of the bowel, but the family would not submit to artificial relief. The child died, the doctor thought, more from lack of drainage through the bowels than from sheer malignancy. He had only one action for fourteen days. That was just before his death. It was small in quantity, consisting of a little mucus and blood, with a very small amount of fluid fæcal matter. He thought there could now be no doubt as to the malignancy of the trouble.

Point of Selection for Making Arttficial Anus.

Dr. M. D. Hoge, Jr., had read Dr. Hunter McGuire's report on twenty-one cases of supra-pubic cystotomy, in which Dr. McGuire said, that if he had a case upon which to operate for making an artificial anus, he would select somewhere in one of the recti muscles, near the median line, because he had noticed that the contraction of these muscles tended to close any opening that might be about the location just mentioned. This case of Dr. Michaux would have been a good one for such an operation. The boy's life might have been saved if such a step could have been taken after the bowel was closed.

Osteo-Sarcoma of the Orbit.

Dr. Chas. M. Shields, three months ago, saw a child eighteen months old suffering from protopsis of the right eyeball. It began as a drooping of the upper lid. Ptosis soon gave place to protrusion of the ball. At the time he first saw it (five weeks after its commencement), the right eye-ball was about three-quarter inch in advance of its fellow. The cause seemed to be some growth or enlargement situated about the upper and outer part of the orbit. The said growth or enlargement continued to increase in an upward and outward direction for a period of three weeks, when the doctor advised an operation. The original trou-

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ble seeming as above stated, to be at the upper and outer part of the eye, made him suspect a cancerous enlargement of the lachrymal gland.

He went with an assistant to the patient's home, intending to put it under the influence of chloroform and examine the part, also to draw some fluid from the suspected gland for miscroscopic examination. He found the child, however, had a fever, and he turned the patient over to the family physician.

In a few days the said physician called in Dr. Shields, who then found the child had decided meningitis, with high fever and marked opisthotonos. There was also purpura hæmorrhagica over the whole surface of the body. The child died.

The day before death there was a hæmorrhage from the nose, which the doctor attributed to extension of the growth into the ethmoid bone.

A post-mortem was held. A tumor had begun from the roof at the upper and outer part of the orbit. This fact, and its growing upward and outward, had originated the idea of cancer of the lachrymal gland. The growth extended over into the ethmoid, and involved it considerably. He had sent a specimen to the Army and Navy Bureau for microscopical examination. He had gotten no report. He thought the growth an osteo-sarcoma. The most peculiar feature about the whole affair was the purpura hæmorrhagica over the whole surface of the body.

Book Notices.

Annual of the Universal Medical Sciences. Edited by CHAS. E. SAJOUS, M. D., and *Seventy Associate Editors.* Assisted by *over 200 Correcponding Editors, Collaborators and Correspondents.* Illustrated with Chromo-Lithographs, Engravings and Maps. [In five octavo volumes, of over 500 pages each]. 1890. F. A. Davis, Publisher. Philadelphia, New York, Chicago, Atlanta and London. Cloth. Price for five volumes, $5. (From Publishers).

This is the yearly report for 1889 of the progress of the medical sciences throughout the world. It is the synoptical report of all advances recorded in any of over 850 medical journals of every nationality, and of 250 books, monographs, and those that contain any new discovery or suggestion that

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represent an advance in scientific knowledge or thought. It is not only a wonderfully well edited series, but it is so compiled as to be invaluable to practitioners, students, editors and compilers. We have no hesitation in advising that, if the ability of the practitioner does not allow him to subscribe to both journals and this *Annual*, it would be better for him to concentrate his one subscription, so as to be sure to get this year this *Annual of Universal Medical Sciences*, for it contains much more information than it is possible for him to derive from any $100 worth of medical journals published. Of course it is impossible in a book notice to state even a brief of the table of contents of the five volumes. But the general index to subjects, etc., covering over 100 pages is so thorough, as to enable the owner to refer to any given subject at once, if any advance has been recorded anywhere on that subject; so that, the very fact that a given subject is not referred to in this General Index, is quite a proof that nothing of special importance, so far as progress or discovery or information is concerned, has been said about it anywhere in medical literature up to about December, 1889. The editor apologizes for the delay of appearance of this *Annual* about a month beyond its expected issue, by reason of the epidemic of influenza attacking over a half of the associated editors, just at the time that their reports ought to be in process of preparation for the press. But it is surprising to us how quickly and thoroughly their work has been done, and how early the volumes have been issued —scarcely eight months from beginning of preparation of text to the issue of the handsomely printed and neatly-bound books.

We wish also to commend the Publisher for introducing in each volume a few pages of well-selected advertisements, which have helped him very materially in keeping him from raising the subscription price of the work. These advertisement have, in the main, been so worded as to convey information, and we trust will prove sufficiently profitable to the advertisers to induce them to contribute their advertisements liberally to succeeding issues of the *Annual*.

Familiar Forms of Nervous Disease. By M. ALLEN STARR, M. D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, New York. With Illustrations, Diagrams and Charts. New York: Wm. Wood & Co. 1890. Cloth. 8vo. Pp. 339—xii. (From Publishers.)

While this is not a treatise upon nervous diseases, it pos-

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sesses all the qualities which make it a most useful addition to any neurological library. It is divided into 26 chapters, which are written mostly after the order of clinical lectures. The 77 illustrations are specially well selected to prove instructive in themselves. The localization of brain centres is the subject of several chapters, as this is recognized to be of the greatest importance to the diagnostician for surgical treatment especially. And then about 40 pages are given to the localization of spinal cord diseases. Dr. Winslow W. Skinner, Assistant in the Nervous Clinic, writes the practical article on "Locomotor Ataxia, with Some Remarks on the Treatment by Suspension." Dr. Edward E. Swift, another of the Clinical Assistants, writes the Section descriptive of "Infantile Cerebral Paralysis, with Retarded Development." The chapter on "Paralysis Agitans" is by the Chief of the Nervous Clinic, Dr. Frederick Peterson. An Assistant to the same Clinic, Dr. Walter Vought, contributes the chapter on "Chorea." Dr. M. L. Goodkind, another Assistant in the Clinic, gives a very good chapter on "Headaches." Dr. Peterson also describes "The Ordinary Forms of Insanity." "Electricity as a Therapeutic Agent," by Dr. Starr, and "Prescriptions in Use in the Nervous Department of the Vanderbilt Clinic," are the titles of the two concluding chapters. A good Index is appended to the work.

Diseases of the Rectum and Anus—their Pathology, Diagnosis and Treatment. By CHARLES B. KELSEY, A. B., M. D., Professor of Diseases of the Rectum at New York Post-Graduate Medical School, etc. Third Edition. Rewritten and Enlarged. With 2 Chromo-Lithographs and 168 Illustrations. New York: Wm. Wood & Co. 1890. Cloth. 8vo. Pp. 483. (From Publishers.)

This, the recognized standard American work on diseases of the rectum and anus, has been much improved by revision and enlargement. Advances during the past few years have necessitated the entire rewriting of the chapters on the treatment of rectal stricture, and on artificial anus. In fact, on every subject where advances in knowledge have been made, we find that the author has introduced new matter. The new illustrations add greatly to the practical value of the work, so that it becomes now an essential in the library of all general practitioners, as well as of surgical specialists, with regard to diseases and injuries of the lower bowel. The chapters on hæmorrhoids and on pruritus ani will prove specially valuable to practitioners of medicine, as also to surgeons.

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Essentials of Diseases of Eye, Nose and Throat. By EDWARD JACKSON, A. M., M. D., Professor of Diseases of the Eye in Philadelphia Polyclinic, etc., and E. BALDWIN GLEASON, S. B., M. D., Surgeon-in-Charge of the Nose, Throat and Ear Department of the Northern Dispensary of Philadelphia, etc. With 118 Illustrations. Philadelphia: W. B. Saunders. 1890. Cloth. 12mo. Pp. 276. Price, $1. (By mail from Publisher.)

This is No. 14 of "Saunders' Question Compends." It does seem that as excellent as were the first numbers of these Compends, each issue is more excellent than the preceding. The Publisher learns more and more precisely the wants of his subscribers, and thus is regularly selecting the most worthy of editors, who faithfully discharge the work required of them. The present number is divided into Part I, which treats of "Essentials of Refraction and the Diseases of the Eye," by Dr. Jackson; and Part II, on the "Essentials of Diseases of the Nose and Throat," by Dr. Gleason. In keeping with the plan of all of the "Compends," the work consists of categorical questions and their definite answers, to which are added, in many cases, such notes as may be necessary for the better understanding of the subject in hand. We are not acquainted with any books of the kind that are of equal value to these "Question-Compends." As the advertisement states: "Manuals of this kind are in no way intended to supplant any of the text-books, but to contain, as the title declares, the essence of those facts with which the average student must be familiar."

Railway Surgery. A Practical Work on the Special Department of Railway Surgery. By C. B. STEMEN, A. M., M. D., LL. D., Professor of Surgery in Fort Wayne College of Medicine; Chief Surgeon Western Division of Pittsburgh, Fort Wayne and Chicago Railway, etc. With Numerous Illustrations. 1890. J. H. Chambers & Co., St. Louis. 8vo. Pp. 315. Cloth. Price by mail, $3.00. (From Publishers.)

One studies this book to see the differences in the application of the principles of surgery to wounds and injuries arising from railroad accidents, etc. It teaches again the lesson learned during the war, that injuries received from mortar-shell and cannon-shot—however much more trivial in appearance, under given circumstances, may be the gash or the fracture—produce a far greater degree of shock and cause more destruction of tissue beyond the immediate site of the wound than injuries or wounds of apparently equal

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extent received from musket, pistol, or bayonet. Dr. Stemen's work is well-filled with practical detail and useful suggestion, and every surgeon connected with railroads, rolling-mills, mines, etc., should attentively read what the author has collected as useful fact, and systematized in the shape of practical suggestions. It seems strange that so many medical men should be satisfied more with the salaries received from their official positions, without an apparent effort to improve their opportunities to learn more of their special line of work, than is shown by the ordinary general practitioner.

Essentials of Anatomy and Manual of Practical Dissection, together with the Anatomy of the Viscera. Prepared Especially for Students of Medicine. By CHAS. B. NANCREDE M. D., Professor of Surgery and of Clinical Surgery in University of Michigan; late Surgeon to Jefferson Medical College Hospital, etc. Third Edition. Revised and Enlarged. Based on the Last Edition of *Gray's Anatomy*. Thirty Handsome Full-page Lithographic Plates, in Colors, and 189 Fine Wood-cuts. Philadelphia: W. B. Saunders. 1890. Cloth. Demi 8vo. Pp. 388. Price, $2.00 net. (By mail from Publisher.)

This a book alike useful to student and practitioner. It is full enough for all College students to use it as a guide in their study, and also to refresh the memory of the practitioner in his effort to recall details with which he has ever been familiar. The illustrations and the descriptions are, in general, very accurate; indeed these facts, combined with the remarkably low price of the book, will make many adopt this who will look upon Gray's *Anatomy* as simply a luxury. The text descriptions are arranged mostly as answers to questions, which precede the paragraphs.

A Treatise on Neuralgia. By E. P. HURD, M. D., Physician to Anna Jaques Hospital, Newburyport, Mass., etc. 1890. George S. Davis, Detroit, Mich. 12mo. Pp. 153. Paper, 25 cts.; Cloth, 50 cts. (From Publisher.)

This number of "The Physician's Leisure Library" is a well-prepared practical treatise, compiled by an author accustomed to study, and familiar with the wants of practitioners. It devotes a full chapter to "Particular Forms of Neuralgia," and traces the effects as manifested by the neuralgia to its causes. The section on treatment is first-rate. This is a specially valuable number of the "Library."

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Food in Health and Disease. By J. BURNEY YEO, M. D., F. R. C. P., Professor of Clinical Therapeutics in King's College, London, etc. Philadelphia: Lea Brothers & Co. 12mo. Pp. 583. Cloth. (From Publishers.)

The publishers have begun a series of "Clinical Manuals for Practitioners and Students of Medicine," which appear to be so well selected as to subjects and ability of authors as to command attention. The "Manual" now under notice is thoroughly scientific in its discussions, and yet practical enough in details to be understood and adopted as a guide-book by nurses—non-professionals as well as professionals. By the physiologist and practitioner, it must be accepted as a standard work of reference. To the physician, it is of great value as detailing to him the articles of diet and the modes of preparing them for the sick. An index is appended for easy reference to diseases, foods, etc. The practitioner will regret that the book does not describe some of the popular articles of diet, known to be serviceable, and point out the relative values of several of the best. Still the book, as it is, is "good enough" for daily use.

Some Fallacies Concerning Syphilis. By E. L. KEYES, M. D., Consulting Surgeon in Bellevue, Charity, St. Elizabeth's, and Skin and Cancer Hospitals of New York, etc. 1890. George S. Davis, Detroit, Mich. 12mo. Pp. 71. Paper. 25 cents.

This number of the "Physicians' Leisure Library" states thirteen common fallacies about syphilis and its treatment, which the eminent author thinks ought to be corrected. We make a note of them in the department devoted to Analyses, Selections, etc. If one reads the text in connection with the propositions or "fallacies," he will be compelled to recognize that Dr. Keyes is most probably correct in all of the thirteen statements, as he is undoubtedly correct in most of them.

Fever, Thermotaxis, and Calorimetry of Malarial Fever. By ISAAC OTT, M. D., Ex-Fellow in Biology, Johns Hopkins University, etc. 8vo. Pp. 10¹. Reprints from *Journal of Mental and Nervous Diseases.* 1889. (From E. D. Vogel, Bookseller, Easton, Pa.)

This pamphlet contains three papers recording the details and conclusions of experimental studies on the subjects indicated by the title, which are of great value to the scientific student.

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Rheumatism and Gout. By F. LeROY SATTERLEE, M. D., Ph. D. Professor of Chemistry, Materia Medica and Therapeutics in New York College of Dentistry, etc. 1890 George S. Davis. Detroit, Mich. 12mo. Pp. 83. Paper, 25 cents. (From Publisher).

A learned writer who has himself experienced these ailments, and found benefit in treatment is the author of this number of the Physician's "Leisure Library." The practical character of this monograph is shown in that about forty pages are given to details of treatment. Like preceding numbers of the Library, this number is useful to the general practitioner.

Wood's Medical and Surgical Monographs. Vol. VII, No. 1. July, 1890. 8vo. Pp. 249. Published Monthly. $10 a year; single copy, $1. Wm. Wood & Co., Publishers. New York.

This is a number of general value. Its Table of Contents is as follows: Stricture of the Rectum, by Dr. Chas. B. Kelsey, of New York—46 pages; Influence of Heredity on Alcoholism, by Paul Sollier, of Paris—125 pages; Rabies, by Louis Pasteur, of Paris—21 pages; Colotomy, Lumbar, and Iliac, with Special Reference to the Choice of Operation, by Thomas Bryant, F. R. C. S.—22 pages; Massage of the Abdomen, by Rubens Hirschberg, of Odessa—24 pages. Illustrations are introduced where necessary to make the text better understood.

Editorial.

The Medical Society of Virginia

Will be in session at Rockbridge Alum Springs, Va., September 2nd, 3rd, 4th and probably a part of 5th. We have arranged to present a full report in our October number. Among distinguished visitors not named in the Executive Committee's Announcement, who are expected, are Drs. Landon Carter Gray, of New York, W. E. B. Davis, of Birmingham, Ala., George Tucker Harrison, of New York, I. N. Love, of St. Louis, etc. A feature of interest connected with this session, will be the awarding of the Dr. Hunter McGuire Prize of $100, for the best original essay on "*The Diagnosis, Pathology and Treatment of Chronic Cystitis in the Male.*" Six competing essays have been received by the Secretary, which will be handed over to the Committee appointed to examine and decide which, if any of them, is entitled to the Prize. The social feature of the session will be

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well provided for by the managers of the Rockbridge Alum Springs Co. An attractive feature will be the exhibition of instruments, pharmaceutical preparations, etc. In a word, the session promises to be, in every respect, a great success.

Dr. L. Lankford, of Norfolk, Va.,

Sailed from New York August 29th, for Europe—to be absent some six months or more. While abroad, he expects to take a private course of some three months under Mr. Tait, of Birmingham, Eng.; then under Dr. Martin, of Berlin; and then spend a month or more in London. We have the promise of hearing from him through the pages of this journal while he is away from home.

The Catalogue of the New York Polyclinic

Shows an attendance for the session of 1889–90 of 422. The following extract shows that the Faculty have resolved to exclude all but graduates of regular Medical Colleges from matriculating at this school:

"Practitioners who are graduates of a regular Medical College, or who, having attended one or more courses of lectures at such Colleges, have a legal permit to practice, will be admitted."

The Description of the Johns Hopkins Hospital, by John S. Billings, M. D.,

Presented by the Trustees of the Hospital, is a quarto, of fine text, with 56 plates, representing the building, grounds, etc. The volume contains the letter of Johns Hopkins, donating the grounds, etc, to the Trustees in March, 1873, as also the Addresses of Francis T. King and Dr. John S. Billings during the exercises of opening the Hospital in May, 1889. We return thanks for the copy sent us.

Dr. Joseph A. White

Moves this month into his handsome new house (No. 200 East Franklin Street, Richmond, Va.) which he has just built with special reference to his practice, which he limits to diseases, etc., of the eye, ear, throat and nose.

Substitution and Adulteration of Drugs.

Some of our exchanges are stating that the report of the New York Analyst of Drugs shows that the chances for getting drugs of good quality on prescription is 43.8 per cent.; fair, 17.4; inferior, 26; not as called for, 11.6; excessive strength, 1.2.

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Dr. Isaiah H. White

Is handsomely fitting up several rooms in his house (Southwest corner Franklin and Second Streets, or No. 115 East Franklin) in this city, for the reception of a few select patients requiring his professional services. His advertisement in this number more fully describes his purposes. Such private institutions are needed in every community of anything like as large a population as Richmond. We wish him that success in his new undertaking to which his well known ability as a surgeon and physician entitles him.

T. Roberts Baker, Ph. M.,

Whose advertisement appears on the inside cover of this journal, is a veteran in Pharmacy. He was the first President of the Virginia Pharmaceutical Association, and the first President of the Virginia Board of Pharmacy. He has also been first Vice-President of the American Pharmaceutical Association, and last year the degree of Master in Pharmacy was conferred on him by the Philadelphia College of Pharmacy, of which institution he is an alumnus. His business was established in 1856, and the house has always maintained a reputation for the purity and reliability of goods not surpassed by any other house in the country.

Woman's Medical College of Cincinnati.

Beginning 1890, all candidates for graduation must have attended three regular courses of lectures in some reputable Medical College before they will be admitted for examination for the degree of Doctor of Medicine. It will be noticed in the advertisement that this College has changed the time of holding the regular courses of lectures from spring and summer to a fall and winter term. As ladies will, sooner or later, be admitted to the ranks of the profession, urge them to graduate from an excellent College, such as this.

The Asheville Medical Review

Is a sprightly-edited and neatly-published journal, which we have placed on our exchange list, with the best wishes for its successful career. Drs. Frank T. Meriwether and Longstreet Taylor are editors and publishers. Address them in Asheville, N. C., with $2 for annual subscription. It is to be a 50-page monthly; and if all subsequent issues are to equal its first (on August 15th), then we will feel that another good journal exists in North Carolina.

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American Pharmaceutical Association.

The Thirty-Eighth Annual Meeting will occur Monday, September 8th, at Old Point Comfort, Va.. Messrs. Charles E. Dohme and J. F. Hancock, of Baltimore; Mr. T. Roberts Baker, of Richmond, Va.; Mr. E. C. Jackson, of Norfolk, Va.; and Mr. P. W. Bedford, of New York, N. Y., compose the Committee of Arrangements and Entertainments. Arrangements have been made for visitors to drive about Richmond, and for a special trip to Luray, Va., where are the wonderful caverns, which make a visit to that place one of special interest to students of nature. Other pleasures are named in the Circular Announcement. The session promises to be one of great scientific interest, as well as sociable.

The Mississippi Valley Medical Association

Will hold its Sixteenth Annual Session at Louisville, Ky., October 8th, 9th, 10th, 1890. The meeting is to be honored by visits and papers from Dr. Frank Woodbury, of Philadelphia, and Dr. John A. Wyeth, of New York. The President is Dr. Joseph M. Mathews, of Louisville; Secretary, Dr. E. S. McKee, of Cincinnati; Chairman Committee of Arrangements, Dr. I. N. Bloom, of Louisville. A large number of gentlemen prominent in medicine in the Mississippi Valley have consented to take part in the programme. Science by day and sociality by night is the rule.

The American Rhinological Association will hold its Annual Meeting at the same place October 6th, 7th 8th, 1890.

The Tenth International Medical Congress

Convened in Berlin, August 4th. Prof. Virchow, President of the Congress, made the opening address. About 5,000 doctors attended, of whom about one-half were foreigners, of which half 620 were Americans. Rome was selected as the place for holding the Eleventh International Congress in 1893. Reports of the scientific proceedings are just beginning to reach this country as we go to press.

Rawley Springs, Va., Open Until November.

The tonic and alterative value of the Rawley Springs Water is known to the physicians of Virginia, as attested by the recommendation for various conditions given some years ago by the Medical Society of Virginia. It is likewise favorably known throughout the United States. We are informed that, owing to the demand for rooms at this resort, the hotel will be open *until November* of this year.

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VIRGINIA
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RICHMOND, OCTOBER, 1890.

Original Communications.

ART. I.—Chronic Cystitis in the Male—Its Pathology, Diagnosis, and Treatment.*

By R. M. SLAUGHTER, M. D., of Theological Seminary, Va.

Motto: "CESSANTE CAUSA, CESSAT EFFECTUS."

NATURE AND CLASSIFICATION.—The most common of all diseases of the urinary organs is cystitis or inflammation of the bladder, in its various forms. This disease, in the language of Desnos, presents itself in divers forms; its causes are numerous; its evolution and march variable, and its anatomical lesions multiple.

The chief characteristic of the disease is the presence of muco-pus in the urine, in greater or lesser quantity.

The mucous lining of the bladder is the structure primarily and generally alone affected, though, in rare cases, the deeper structures are also involved. According to the anatomical portion or portions of the bladder involved, there

* Being the Essay to which was awarded the "Dr. Hunter McGuire Prize" of $100, by the Medical Society of Virginia, during its Twenty-First Annual Session, at Rockbridge Alum Springs, Va., September 2nd, 1890.

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may be cystitis mucosa, or cystitis mucosa with interstitial cystitis, or, again, these two with pericystitis. Practically, the first of these only can exist alone. The second and third may follow in order as a consequence of extension of the disease. Thus, if the inflammation of the mucous membrane should be severe enough to lead to ulceration and sloughing, the connective tissue of the vesical wall may become involved in the inflammatory process, giving rise to an interstitial cystitis, which may possibly eventuate in an abscess.

The still deeper extension of the inflammation to tissues around and outside the bladder results in peri- or epicystitis. These varieties are, then, simply grades in intensity of the same morbid process.

Cystitis is again divided into acute, sub-acute, and chronic forms.

Acute cystitis, it is held by the highest authorities, never occurs spontaneously, and is a very uncommon affection, except as an exacerbation of already existing chronic disease, or from traumatic causes, mechanical or chemical (irritating urine)—(Keyes).

Chronic cystitis rarely commences as an acute inflammation, but is usually chronic from the beginning. It, too, probably never occurs as a so-called idiopathic affection; but as a result or complication of other genito-urinary disorders it is very common, for there are very few of these diseases of which it does not form a complication at some time or other during their course; and the inflammation, once set up, is in no way self-limited, but tends to grow slowly and steadily worse so long as its predisposing cause remains. Chronic cystitis has been defined to be an inflammation of the bladder, whose duration is long or indefinite, and which resists therapeutic intervention. Its symptoms differ chiefly in degree from those of the acute form, and it rarely runs its course without the occurrence of acute exacerbations from various influences—(Desnos).

There are two recognized forms of chronic cystitis differing chiefly in degree. The first is characterized by more or

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less active hyperæmia, hyper-sensibility, and slightly increased secretion. The second is characterized by passive or congestive hyperæmia from local debility of the capillaries, some hyper-sensibility, and great secretion of mucus mingled with pus in greater or less quantity. This is the form usually designated as "catarrh of the bladder."

The first of these forms, simple chronic cystitis, is the condition which exists in most cases of irritable bladder from its several causes—(Thompson).

Whenever there exists undue frequency of micturition, with increased mucous secretion from the bladder, however small the amount, the signs of the acute disease being absent, there is present sub-acute or simple chronic cystitis. Pus is always present in the urine, too, as may be demonstrated with the microscope. Any source of irritation in or about the bladder may give rise to this trouble, which generally ceases with the removal of its cause, as may generally be easily accomplished.

The second form, one of far greater gravity and importance, is that which will almost entirely occupy our attention in the consideration of our subject.

Cystitis is furthermore divided into two other forms, partial and total, or of the neck and of the body. For all practical purposes, it is scarcely necessary to regard this distinction. In all cases, the lesions are more pronounced in the cervical region, and even when the whole organ is involved, they are most severe about the neck and trigone. In total cystitis, there is always cystitis of the neck, for in this region the lesions are predominant—(Guyon).

Pathogenesis.—As in every other inflammation, two prime factors are necessary to the setting up of a cystitis, and these are the predisposing and the exciting causes. The *exciting cause* is, it is little to be doubted, a pathogenic microorganism. This fact seems clearly established in the now well-recognized existence of gonorrhœal and tubercular cystitis, and in the occurrence of the disease after catheterization. It cannot be doubted that bacteria may find their way into the bladder by passing down in the urine. Many

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of these are probably saprophytic and pathogenic. The existence and specific action of several such bacteria have already been demonstrated—(Clado, Halle and Albarran).

Recent researches have also demonstrated the existence of numerous micro-organisms, some of which are pathogenic, in the whole extent of the normal urethra, even when there is or has been no inflammation, and these may progress into the bladder. The micro-organism is, however, powerless in itself to cause inflammation, for it is incapable of feeding upon, and multiplying in healthy mucous membrane; a suitable soil is necessary to its development and multiplication, and this is only to be found in the walls of the bladder, when they are more or less altered by congestion or lesion. Here, then, is to be found the second necessary factor, the *predisposing cause.*

Congestion of bladder plays an incontestible *rôle.* (Desnos). Its influence is to be found in all kinds of cystitis, acute or chronic, partial or total, of whatsoever nature; but its action is more unfavorable and prolonged when there is structural alteration of the walls. For example, if the bladder be that of a young person, the mucous and muscular tissues of which are healthy, a congestion will be of short duration, and will disappear—leaving no trace; whereas, if any degeneration exists, there will follow a lasting inflammation.

All causes which provoke congestion lend their aid to the establishment of cystitis. Hyperæmias are either active or passive; the first are due to the direct attraction of blood to capillaries of the bladder, such as is produced by sexual excess, masturbation, extensive burns, and above all, chilling (Le Dentu).

Passive congestion is more common, and often accompanies, to a given point, complete or incomplete retention, and sometimes hæmorrhoids, constipation, the sitting position continued for a long time, etc.

In considering the pathogenesis of chronic cystitis, the second factor, the predisposing cause, is of far greater practical importance, for it is through its action that a condition

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suitable for the operation of the exciting factor arises. These predisposing causes are many, and of very different natures, and it is upon their successful removal that the cure of cystitis depends; hence, their practical importance.

All these causes of chronic vesical catarrh may be arranged under two grand heads—(Keyes):

1. *Mechanical*, including obstructive, prostatic, and urethral diseases, stone, morbid growths in the bladder or rectbm, or around the bladder, hernia of the bladder, extrophy, retention of urine, sudden taking off of the pressure of accumulated urine from a habitually over-distended bladder, neuralgia of the vesical neck.

2. *Chemical.*—Very acid urine (rarely), frequently decomposing alkaline urine, from liberated ammonia; urine containing pus, from pyelitis, atony, paresis of the muscular coats, and true paralysis, inasmuch as they invariably tend to produce decomposition of urine by stagnation.

To these should be added cystitis by *propagation or extension* backward of inflammation from a urethra or prostate in a state of chronic inflammation, gonorrhœal cystitis.

The combined action of the chemical and mechanical causes are most generally present, but the mechanical are most frequently present in the beginning, the chemical usually coming with their assistance later. Without entering into detail, it is sufficient to say that all the mechanical causes, as well as traumatic violence, act by provoking congestion or giving rise to inflammatory lesions of the vesical walls. Most of these act primarily by obstructing the free discharge of urine, which then undergoes decomposition, and this is surely followed by congestion, and, sooner or later, by inflammation. In the so-called neuralgia of the vesical neck, if long continued, cystitis may arise from the bruising of the neck by the frequently repeated, and, perhaps, violent and spasmodic contractions in micturition.

The chemical causes predisposing to chronic cystitis lend their aid generally to the mechanical, and are sometimes themselves conducive to inflammation by giving rise to congestion. Very acid urine may sometimes cause cysti-

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tis, but is more likely to produce urethritis (Keyes); acting, however, on an already inflamed bladder, it adds intensity to the congestive or inflammatory process. Decomposing urine, and urine containing pus, aggravates existing congestion or inflammation, and also tend to produce them by the irritating properties of the contained ammonia or pus. Pus coming down from the kidneys may cause cystitis in a perfectly healthy bladder. Keyes calls special attention to this fact, as it is often overlooked. The patient complains of frequent painful micturition, and the urine is loaded with pus. The seat of disease is (erroneously) located in the bladder, and this organ is tormented by the use of instruments or useless injections, the true source of the pus (pyelitis) being overlooked.

Occasionally, patients are met with who are troubled with a mild grade of chronic cystitis, as is evinced by more or less tenesmus and turbid urine. These patients usually attribute the attacks to chilling or catching cold, to drinking, or to sexual indulgence. Careful inquiry will generally elicit the fact that the patient has previously had a gonorrhœa which lasted for a considerable time, and was possibly accompanied by an epididymitis or cystitis. It will also be found that the urine generally contains whitish threads, that it is perhaps rendered more turbid at times by increased secretion of mucus, and now and then, especially at the end of urination, the patient has a peculiar uncomfortable feeling, which, at times, amounts to a slight tenesmus—(Ultzmann).

In these cases, the gonorrhœa, which is supposed to have been long since well, is not really so; for gonorrhœa, and especially those forms which have extended to the deeper portion of the urethra, usually leave traces of its presence, probably in the form of dormant patches of chronic inflammation, in which an inflammatory process, capable of giving rise to a catarrh of the vesical neck by extension of the inflammation, may be lighted up by drinking, sexual indulgence, and, possibly, by chilling. Many authorities give chilling as one of the causes predisposing in itself to cysti-

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tis; but Ultzmann holds, and probably rightly, that we must be very cautious in adopting this factor, in consideration of the protected position of the bladder, and the fact that childhood and boyhood show a special immunity from vesical catarrh. Moreover, cystitis is also very rare in men who have never had disease of the generative organs, especially gonorrhœa.

Occasionally, patients are met with in whom a vesical catarrh grows worse, or apparently lights up in the severer seasons of the year. The cause of this, says Ultzmann, is to be sought in those low constitutional conditions allied to scrofula and tubercle. The catarrh not infrequently vanishes in summer, when the entire organism shows that it is improving under a strengthening and appropriate diet..

Painless and chronic swellings of the epididymis not infrequently accompany this form of chronic cystitis.

One other condition, congenital phymosis, should be mentioned as sometimes leading to the development of cystitis, through the reflex retention of urine excited by it, if not discovered and removed.

Pathological Anatomy.—In chronic cystitis, the pathological appearances vary with the severity and length of standing of the disease, and the nature of the predisposing cause. The lesions attain their height about the trigone and base of the bladder. The mucous membrane is softened, swollen and thickened. Its color is generally a slaty gray, though it has, in some cases, a blackish look. Sub-mucous ecchymoses are frequent, and blackish patches may be seen particularly about the neck and orifices of the ureters. The blood-vessels ramify in abundance, and are hypertrophied and full. The microscope shows that the superficial layer of epithelium has fallen off. The deeper layer, while generally intact, is sometimes wanting also, leaving ulceration. If the disease has extended to the muscular tunic, it is thickened and hardened, and shows a red coloration with grayish stripes. The lesions are those of interstitial cystitis, to which are joined the alterations characteristic of the primitive affection—(Desnos).

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To the primitive lesions may be added divers products of inflammation, such as granulations, sometimes attaining the size of hemp-seed. Villosities, though uncommon, are sometimes seen in gonorrhœal cystitis. Fungo-vascular excrescences, also very rare, may accompany the extensive lesions of incurable cystitis. The same is the case with peritoneal complications. It is only in long-standing and very severe cases that pericystitis occurs.

In long-standing cases of chronic cystitis, purulent collections are sometimes found in the bladder walls. These abscesses may be sub mucous, intra- or extra-muscular. Their size varies from that of a pea to that of a walnut. Their seat may be anywhere in the bladder wall. Purulent infiltration into the bladder may also occur from suppuration in the peri-vesical cellular tissue.

Symptoms and Diagnosis.—The diagnosis of chronic cystitis is generally to be made without difficulty, for, as it has been seen, the disease is rarely met with except as a complication of other affections of the urinary organs, or of those of the central nervous system. Its symptoms belong to the train of symptoms which constitute the clinical history of these diseases. Its etiology is generally sufficiently clear, and especially so when the history of a previous gonorrhœa can be obtained, even in seemingly obscure cases. The disease has its characteristic symptoms; and while a diagnosis must not be based upon any one, or even two of these, it may, with certain limitations, be based upon the co-existence of them all. These symptoms are frequent and painful micturition, the presence of muco-pus in the urine, and ammoniacal fermentation of the urine. The intensity of the symptoms vary greatly in different cases. In one case there may be only a little increased frequency in micturition, with slight tenesmus and slight cloudiness of the urine; while in another there will be excessively frequent and painful micturition, large quantities of muco-pus, and ammoniacal fermentation of the urine.

The symptoms of the acute form may also appear at any time in the course of a chronic cystitis, the former having

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been lighted up by the continued action of the predisposing cause or the supervention of others (effects of cold, violent exercise, drinking, acid urine, etc.).

The frequency of micturition varies greatly in different cases. The desire may occur rather oftener than natural, or very much oftener. The act may give such incomplete satisfaction that the desire is nearly constant; and in some cases so imperative as to be irresistible—urine being passed every few seconds. This, however, is not incontinency, but a conscious act through irresistible desire.

Many general diseases, as well as various local irritable conditions about the neck of the bladder, in which there is a very troublesome desire to urinate, have, as a symptom, frequency of micturition. In these, there is not a sign of cystitis; consequently, a diagnosis of cystitis could not be based on this symptom alone. Such general diseases are disturbances of nutrition, which run their course with polyuria, diabetes, etc., and spasm of the vesical muscular coat in consequence of lesions of the central nervous system. In those local conditions of irritation which may be mistaken for cystitis, there is a special sensitiveness of the neck of the bladder, such as not infrequently follows masturbation or sexual excess, or occurs after a gonorrhœa has run its course, the desire occurring from reflex impulse. In all these conditions the urine remains perfectly clear, thereby showing no sign of cystitis.

The next symptom is pain, which may be more or less violent. The pain generally accompanies micturition, and may be prolonged after it—(Desnos).

It is less violent, however, than in the acute form. There may be painful sensations which occupy the hypogastrium, perineum and penis, and may sometimes become constant. The cause of pain is the condition of congestion; and if, for example, the patient be one with prostatic hypertrophy, it is felt especially at night during the dorsal decubitus; while, in a subject with stone, it is provoked by movement.

The pain is less as soon as the urine is passed in chronic cystitis, if stone or new growths are not the cause of the in-

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flammation; but intolerance of the bladder to its proper contents still persists, as frequent micturition shows—(Ultzmann).

Pressure above the symphysis pubis gives pain varying in intensity with the severity of the inflammation, if the whole bladder is affected, and a painful desire to urinate may be produced. No pain on pressure above the symphysis is felt if the bladder be only partially affected, that is, in or about the neck. The disagreeable sensation is concentrated in the perineum, rectum, and along the course of the urethra.

The appearance of the urine also varies. In the slighter cases, it is simply cloudy, containing mucus with a few pus cells, as may be shown with the microscope. Again, there may be urine in which there is freely suspended more or less muco-pus. But more often there are clots of stringy muco-pus more or less mingled with crystals of triple-phosphate and blood—(Keyes).

The deposit formed at the bottom of the vessel is generally a yellowish white, sometimes a greenish white color, and has the glairy appearance which is designated as muco-purulent—(Desnos).

When ammoniacal decomposition has taken place, the muco-pus becomes thick and ropy, and forms a viscid mass which sticks to the bottom of the vessel.

In cystitis, the mass of urine remains clear above the deposit after standing, unless there be a renal complication, in which case the urine is thick and lactescent in appearance—(Desnos). This is an indication of pyelo-nephritis.

The term muco-purulent, in describing the secretion of the mucous membrane in cases of chronic cystitis, is considered by Sir Henry Thompson to be more correct than any other. The mucous membrane of the bladder, he says, appears to secrete, as the bronchial mucous membrane is prone to do, much of a homogeneous, structureless fluid, containing numerous pus corpuscles and young epithelium cells; but the proportion of liquor to the corpuscles is much larger than in ordinary pus.

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Muco-purulent urine is one of the characteristic symptoms of chronic cystitis, and, when passed, is always turbid. Should any question arise as to the cause of turbidity of the urine in a given case, it may generally be easily settled by chemical analysis or microscopical examination. The following tests will generally serve to determine the cause of turbidity:—

The turbidity of urine, gradually heated to boiling, vanishes if due to acid urates; increases if due to phosphates; remains unchanged if due to pus. If the turbidity still remains unchanged after boiling and the addition of acetic acid, it is due to catarrh secretion and bacteria.

If it be desired to ascertain if the sediment of urine contains pus, add a few drops of concentrated solution of caustic potash and shake; and if pus be present, the entire sediment will become thick, viscid, and transparent, and capable of being drawn out into threads—otherwise, it will remain unaltered. This transformation is the same that takes place in the bladder when there is ammoniacal fermentation.

The following simple test, it is also said, will show the presence of pus in the urine: Drop into the specimen of urine enough tincture of guaiac to give it a milky appearance, and heat it a few minutes to 100° F. If pus is present, a blue tint will develop. Or, the urine may be allowed to pass through a white filter, on which is then allowed to fall a few drops of tincture of guaiac, producing, if pus is present, a distinct blue discoloration.

The existence of pyuria having been determined, the question might arise as to the source of the pus. This question may be determined by collecting the urine of one passage in the three vessels—the first containing the first portion passed; the second, the second portion; and the third, the last. If pus be found only in the first vessel, it comes from the urethra, or parts near the neck of the bladder. If it be found only in the third vessel, it comes from the interior of the bladder, and from its lowest portion (*bas fond*), from which it is removed by the last drops. It is

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rare, however, if the secretion is at all abundant, that some will not be found in the first vessel. This only shows that pus is contained in this part of the bladder, and its source might be the kidneys as well as the bladder.

If pus be found in all three vessels, and the urine becomes clear above on standing, then the evidence is strong that the pus comes from the bladder. This is to be observed only in very abundant secretion, and the amount in the second vessel is always considerably less.

If the urine does not become clear on standing, and has a milky look, and there is coincident polyuria, then the indication is that there is kidney trouble.

Pyuria of renal origin, it is true, soon sets up cystitis, even in a healthy bladder; but it is equally true, and more frequently the case, that pyelitis (and even pyelo-nephritis) arises from cystitis by extension of inflammation up tbe ureters to the pelvis of the kidney. In either case, there is present one of the two conditions termed cysto-pyelitis and pyelo-cystitis, as the pelvis of the kidney or the bladder is principally affected. The prevailing characteristics of the disease must determine whether the pyelitis or the cystitis predominates.

If pyelitis predominates, polyuria is generally present; the urine has a neutral or slightly alkaline reaction; the specific gravity is lowered, and the purulent sediment will not stick to glass. Albumen is found in greater quantity than the contained pus warrants, and in the sediment will be found, besides pus cells, kidney and bladder epithelium and isolated crystals of triple-phosphate. The pus cells appear to be well-preserved, and sometimes to be pressed together in cylindrical masses.

If, on the other hand, cystitis predominated, polyuria is not present; the urine reacts strongly alkaline, and has a normal or slightly lowered gravity. The sediment is glutinous, and the alkaline pus sticks to glass. Albumen is present in greater mass than corresponds to the contained pus. Carbonate of ammonia is present in considerable amount. In the sediment are to be found much swollen

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pus corpuscles, triple phosphates in great abundance, and also isolated scales of kidney and bladder epithelium.

Cysto-pyelitis and pyelo-cystitis occur frequently with stricture of the urethra, hypertrophy of the prostate, and with paresis or paralysis of the bladder. From cystitis or pyelitis arises very often, through contiguity of tissues, cysto-pyelitis or pyelo-cystitis. It even often happens that cystitis alternates with pyelo-cystitis, and pyelitis with cysto-pyelitis —(Hoffman and Ultzmann).

Again, the origin of a pyuria may be an abscess in the parenchyma of the urinary tract or its vicinity, which has opened into it at some point. In these cases, the varying amount of pus affords in itself presumptive evidence of the source being an abscess; moreover, the pus is genuine abscess pus, and certainty is afforded by microscopical examination. If the pus comes from mucous membrane alone, there will be found, in addition to pus cells, the epithelium of inflamed mucous membrane. If it comes from an abscess cavity, granular cells, or so-called inflammation cells, which are easily recognized, are never absent.

Another important and common, though not invariable, symptom of chronic cystitis, is alkaline urine—the alkalinity being due to ammoniacal fermentation. This ammoniacal urine is the common accompaniment of those conditions in which the bladder is, from any cause—be it atony of its walls, prostatic obstruction, or otherwise—unable to empty itself entirely. The urine remaining in the bladder undergoes decomposition and ammoniacal fermentation through the action of the putrefactive agents (bacteria) present in it. It then follows that all the urine reaching the bladder from the kidneys, although its condition on entering may be perfectly normal, immediately undergoes similar decomposition, the urea being transformed into carbonate of ammonia.

Musculus attributed this transformation to the action of a ferment which he supposed was liberated from the inflamed mucous membrane.

The researches of Pasteur, Van Tieghem, Cohn, Miquel, and others, affirm that the fermentation is due to the action

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of a micro-organism, the micro-coccus ureæ, and, possibly, others.

Decomposed urine is very irritant to the vesical mucous membrane, and soon sets up the inflammation or aggravates an existing diseased condition. The presence of ammoniacal urine and muco-purulent secretion with the characteristic viscid, sticky sediment, indicates the particular condition commonly termed catarrh of the bladder.

Cystitis and alkaline fermentation, says Ultzman, are so well known as inseparable terms, that formerly the differential diagnosis between cystitis and pyelitis was always made with litmus paper. To-day we know that there are vesical catarrhs with a urine of acid reaction; and that, on the other hand, we not seldom see an alkaline urine which has no relation whatsoever to a catarrh of the bladder.

Alkalinity may be due to the presence of fixed alkalies as well as to alkaline fermentation. Alkalescence through fixed alkalies, such as is seen in phosphaturia, is easily recognized by the fact that lime and magnesium salts in the sediment form no combinations with the ammonia. Such urine is frequently seen in the central and peripheral diseases of the nervous system; and, therefore, often in paralysis of the bladder. When alkalinity is due to carbonate of ammonia, we find in the crystalline ammonia magnesian-phosphate, and sometimes urate of ammonia. The ammonia combinations make it clear.

Ammoniacal fermentation does not necessitate the presence of catarrh; for example, we sometimes see a turbid ammoniacal urine in the course of acute inflammatory and febrile diseases, both after the febrile stage and during convalescence. There can, however, be no cystitis if there is no catarrhal secretion present in addition.

In severe cases of cystitis, such general symptoms as agitation insomnia lassitude and anorexia may be observed and, if the disease is very severe, or of long standing, general depression and weakness.

Cystitis is never accompanied with fever, and its occurrence during the course of disease indicates complication,

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and particularly an extension of inflammation towards the upper urinary passages—(Guyon).

While of less practical importance, it may here be of interest to note the appearance of the interior of the bladder in chronic cystitis as seen with the cystoscope. As shown by his instrument, Witze describes two forms of the disease.

In the first, the mucous membrane shows a striking paleness; and in the presence of slight inflammation accompanying such affection as hypertrophied prostate, it appears nearly normal. Small masses of muco-pus are seen adhering to the walls.

In the second form, which corresponds to the severer lesions, the swollen, thickened mucous membrane stands out in places, giving the appearance of being dented. The degree of redness varies:—sometimes it is quite pale; sometimes a dull red; again it is a deep red, but never so deep as in the acute form.

The touching of a vascular point with the instrument will provoke hæmorrhage. A small drop is first seen, and this increases more and more, standing out like a small polypus.

The prime characteristic of chronic cystitis is, then, the presence in the urine of muco-pus which is secreted by the vesical mucous membrane. The existence of this, with frequent and painful micturition and pains in the bladder and neighboring parts, particularly on pressure, permits the diagnosis of cystitis; and the signs of the acute form being absent, of chronic cystitis. Ammoniacal fermentation may or may not be present, but when it is, is an important symptom.

Finally, we append a statement of the characteristics of the urine of chronic cystitis as given by Hoffmann and Ultzmann. These authors describe three grades of the disease, as follows:

First grade. This form is characterized by wine-yellow urine, with a normal specific gravity, and whose twenty-four hours amount is not increased. The reaction when first passed is acid, but in a few hours changes suddenly to alkaline. Sedi-

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ment considerable and cloudy. Sometimes when freshly passed with an acid reaction, it has a particularly strong urine odor. The turbidity does not settle, and consists in great part of bacteria. The excretion of normal elements is not altered. Of abnormal elements, carbonate of ammonia is present in small quantity. Albumen is not present. The sediment consists of increased cloudy mucous secretion with bacteria. [Other authorities claim that pus cells are also present.] Microscopically we find single mucous corpuscles and bladder epithelium, and after a few hours, triple phosphate crystals in the sediment.

Such urine is constant with persons who find themselves obliged to employ catheters for the passage of urine, as with hypertrophy of the prostate, paresis of the bladder, and similar hinderances to urination.

Second grade. A turbid, wine-yellow urine, the turbidity being caused by pus-corpuscles and bacteria. The twenty-four hours amount is not increased. The specific gravity is normal. The reaction even when passed is alkaline. The sediment is a greenish yellow, and sticks to the glass. The excretion of normal constituents is altered only in so much that the greater part of the urea is changed into carbonate of ammonia. Of abnormal constituents, we find albumen in the urine in amount corresponding to the pus in the sediment, and much carbonate of ammonia. The sediment consists chiefly of alkaline pus mixed with crystalline and amorphous, earthy phosphates. The pus-corpuscles are greatly distended, their contour destroyed, and their nuclei coming out. Free nuclei are often found in a homogeneous turbid ground sediment, and besides these, bacteria and single bladder epithelium cells. Often the pus is completely dissolved in a urine rich in ammonium carbonate, whereby the urine becomes syrupy and has a stringy consistence.

Third grade. This is a purulent catarrh, complicated with ulcerative processes in the bladder. The urine is of a dirty brown color, and has a cadaverous odor. The reaction is strongly alkaline. The turbidity proceeds from bacteria and blood and pus-corpuscles. The specific gravity is low-

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ered. The sediment is a dirty yellow, and sticks to the glass. The excretion of normal constituents is diminished. Of abnormal constituents, there is much albumen, blood-coloring matter, carbonate of ammonia, and sulphide of ammonia.

The sediment consists of alkaline pus mixed with blood and earthy phosphates. Microscopically, there are observed in large quantities bacteria, molecular detritus, and single cells of bladder epithelium.

This process comes from paralysis of the bladder and high stages of prostatic hypertrophy. It is complicated with suppurative nephritis or pyelo-nephritis. Similar urine comes with tubercular ulceration of the bladder and with diphtheritis.

Cysto-spasm may be confounded with bladder catarrh, because the symptoms of the two diseases are very similar. The investigation of the urine alone can determine the differential diagnosis. With vesical spasms the, urine is generally clear, and if turbid, this arises from earthy phosphates. The urine is, moreover, pale and slightly acid or neutral.

TREATMENT.—Chronic cystitis, as we have seen, is always a result of some other morbid process, its predisposing cause. The first principle of treatment is to remove the cause. The disease will then get well, provided there has taken place no permanent organic change in the bladder walls.

Some of the causes are, however, not removable, while again, in other cases, organic changes have taken place, and removal of cause will not cure the disease. In these cases we must treat chronic cystitis as a disease rather than as a symptom; and in some cases, the treatment can only be palliative, on account of the extent of the organic changes. Few, however, are so bad that they may not be ameliorated by judicious treatment.

The simple form of the disease first requires consideration. As we have seen, this is the form which exists in most cases of so-called irritable bladder, whether from very acid urine or any other cause of irritation in or about the

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bladder. The only treatment usually required is rest, alkalies to neutralize the hyperacidity of the urine, aperients, hot hip baths, or fomentations, and possibly anodynes.

The alkaline diuretics in combination with demulcent or terebinthinated vegetable diuretics are very valuable. We have found such a combination as the following formula, administered in lithia water, extremely efficacious.

℞. Potassium bicarbonate.....ʒij
Fl. ext. cornsilk .....ʒjss
Water.....ʒivss

Mix. S.—Tablespoonful in half a tumbler of Buffalo Lithia Water every three hours.

According to the nature of the cause, some one of the other vegetable diuretics, such as couch-grass, buchu, kava-kava, pichi, or some of the like, may be used. It is claimed that these agents exert a special influence on inflamed vesical mucous membrane. Of the alkaline diuretics, the acetate or bicarbonate of potassium, or the liquor potassæ are most used. Sir Henry Thompson thinks highly of the old combination of liquid potassæ and hyoscyamus, which is, though chemically incompatible, of great value clinically.

Another variety of the simple form is mentioned by Thompson as occurring at a stage of subsidence between the acute attack and the convalesence, in which the very irritable condition of the mucous membrane gives rise to painful and frequent micturition with urgency and dull pain about the bladder, and often a slight appearance of blood at the end of the act. Here local applications are of most value, and he considers a weak solution of silver nitrate (not stronger than one-half grain to four ounces) the best. The method of injection will be described later on.

Passing on to the consideration of the *treatment of the severer forms of chronic cystitis*, we pass by those varieties which arise from readily removable causes. Their obvious treatment is removal of cause.

The forms which require our earnest consideration are those which arise from causes less readily, or not possibly removable; and embrace chiefly those cases in which re-

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tention of urine is the important factor, whether it be due to obstruction as caused by prostatic hypertrophy, atony of the vesical walls from lesions of the central nervous system, or other causes producing a like result.

The first principle of treatment in these cases is that the bladder be thoroughly emptied with the catheter once, twice, or three times daily. The patient cannot entirely empty his bladder by the natural act, and the retained (residual) urine must be removed, for it is by the irritant effect of decomposed residual urine that the inflammatory process is kept up. Let the patient pass, by the natural act, all the urine he can. Then the instrument should be used and all the retained fluid drawn off, and its amount must determine how often the catheter should be passed daily. If the amount be less than three ounces, the instrument need only be used at night. If much more than this quantity, it should be used night and morning. If the larger portion of urine is retained, it should be used three times daily—(Thompson). Of course if a patient can pass none himself, it must be drawn off as often as necessary.

The catheterization should be done with the utmost gentleness. The patient should be taught to use the instrument himself. In a large number of cases, the flexible, soft catheter answers best. Thompson considers that the French coudée catheter is the best instrument, as its turned up point passes more readily whatever eminence is presented at the neck. In cases in which it is impossible to pass a flexible instrument, the gum catheter with a stylet, or a silver one may be resorted to. The gum catheter with stylet has the advantage of being an inflexible instrument, and yet one, whose curve can be easily and quickly altered. In order to pass easily over prostatic enlargement, a catheter should be well curved to its very point—(Thompson). In some cases, the prostatic silver catheter is the best instrument.

The absolute importance of keeping all of these instruments perfectly clean and aseptic, it seems only necessary

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to mention, but not to dwell upon in these days of antiseptic surgery.

In many cases of the slighter forms of prostatic hypertrophy, keeping the bladder clean of residual urine suffices to relieve and keep in abeyance a cystitis.

However, cases of prostatic enlargement are met with in which the employment of the catheterization fails, or is unavailable, and other methods must be sought. The methods that meet the approval of the authorities of the present day are drainage of the bladder, or permanent removal of the obstruction. Some surgeons hold that both of these conditions are better fulfilled by supra-pubic cystotomy than by urethral or perineal operation. *Supra-pubic prostatectomy* was first performed by Dr. W. F. Belfield, of Chicago, in 1886. The operation was afterwards taken up and is strongly advocated by Mr. A. F. McGill, of Leeds, England. The operation consists in opening the bladder above the pubis in the usual manner, and removing with scissors and forceps that portion of the enlarged prostate which prevents the outflow of urine.

In a paper read last year (1889) before the British Medical Association, Mr. McGill gave an interesting account of the results of his experience. He had then performed the operation on twenty-four patients, all elderly, and some very old and feeble men, with a mortality of 16.6 per cent. Three of the four deaths resulted directly from the operation, and one from pneumonia during convalescence. In ten cases the operation was undertaken for removal of stone, the prostatectomy being incidental. Two of the remaining cases were still under observation; one was lost sight of. Of the ten cases in which the final result could be stated, eight had remained well. In the ninth case, it had been found impossible to remove the prostate on account of its extreme hardness, and only drainage was attempted. The tenth was for a time relieved, but died ten months after operation. The reading of this paper was followed by an interesting discussion, which showed a concensus of opinion in favor of radical measures in selected cases of prostatic hypertrophy.

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It would seem that the operation deserves a careful consideration and fair trial.

When only drainage of the bladder is attempted, this too is held by the best authorities to be most satisfactorily accomplished by the supra-pubic incision.

Nevertheless, some surgeons still advocate perineal prostatomy, and notably, drainage by median perineal incision, division of the floor of the prostate, and the insertion and retention of a suitable drainage tube, as advocated by Reginald Harrison. Of supra-pubic drainage of the bladder, more will be said later on.

We come next to the consideration of the treatment of a class of cases in which it is impossible to completely empty the bladder with a catheter, although the instrument may be introduced without difficulty. This is due to an irregular shape of the prostate, which throws out protuberances into the vesical cavity, between which are sinuses that hold a considerable quantity of urine. Sometimes, too, the hypertrophied walls of the bladder form numerous small sacculi, which also hold urine. The catheter does not remove the urine contained in these pouches, and it soon becomes decomposed and irritating. It consequently becomes necessary to wash out the bladder two or three times a day. For this purpose a flexible catheter is introduced into the bladder and connected with a reservoir, say a fountain syringe containing warm medicated water (say 100° F).

The bag is then raised *just high enough* to allow the fluid to *flow gently* into the bladder. Thompson urges that not more than an ounce be introduced at one time, and this is allowed to run out by disconnecting the bag from the catheter. The fluid will probably be thick and dirty; then inject another ounce and let it run out, and so repeat several times. Four separate washings of an ounce each, he says, would have been more efficient than could two washings of four ounces each, and the amount of instrumental irritation would have been reduced to a minimum, and ten to one, the patient will find the performance soothing.

The above described method of washing out the bladder

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is a very simple one; and instead of the rubber bag, any of the nasal douche apparatuses in market answers very well.

Lavaux has recently strongly recommended the washing out of the bladder by this same means of hydrostatic pressure, but without the use of the catheter. In place of this instrument, he advocates the use of a metallic tube, about an inch (three centimeters) in length, fitting into a conical perforated, India rubber obturator, which is introduced within the urethral orifice. This is connected with a reservoir, and when this is raised to a given height, the fluid acquires sufficient force to overcome the sphincter and passes into the bladder. The stream is regulated by the different calibres of the short tubes, of which there are six sizes, varying from a little more than one to three millimeters in diameter.

It is said that it is surprising how much can be accomplished by this method, and that much suffering is spared patients. It also offers greater freedom from risk of septic infection than does the catheter method. The size of the tube to be used is regulated by sensibility of the bladder and the resistance of the sphincter in each case. The force of the water flowing through each tube with the reservoir at a given height has been calculated.

Desnos, on the other hand, declares that this method is far from being inoffensive, and should by no means be generally adopted.

Many different agents have been used to medicate the injections. Thompson prefers the acetate of lead, commencing with one-sixth of a grain to the ounce; next to this the nitrate of silver, one grain to eight ounces; or dilute nitric acid may be used—strength of ten minims to four ounces.

Of other substances advocated by different writers, may be mentioned the borate of soda, fifteen grains to the ounce; chlorate of potassium, five to fifteen grains to the ounce; silicate of soda, one per cent. solution; boro-glyceride, one to forty; salicylic acid, ten grains to the ounce; resorcin, five to ten per cent. solution, etc.

Boric acid, however, while a less powerful antiseptic than

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some of the others mentioned, is, we believe, the most harmless and efficient agent in a large number of cases. It may be used in strength of a saturated solution (4-100). Even when other substances are to be used, it is well to use a weak solution of boric acid for the first washing, and repeat until the water comes back clear. As it has been said, very small quantities of fluid should be injected at a time at first, but as the condition of the bladder improves and its tolerance increases, the quantity may be cautiously increased. The tolerance of the bladder should always be taken as a guide, and never should enough fluid be injected to cause pain. The fluid should also be as warm as can be comfortably borne, at first about 100° F.; later, higher temperatures may be of advantage.

It has also been recommended that in cases in which injections are painful, in spite of all precautions, that the first injection should be a solution of cocaine.

Dr. L. Frey recommends iodoform as especially suited on account of its antiseptic, analgesic and deodorizing properties for the treatment of chronic cystitis.

The bladder is to be first cleansed with warm water, and then some of the following mixture, in strength of a tablespoonful to the pint, injected into it.

℞—Iodoform ....50 parts.
Glycerine..... .....40 "
Distilled water..... ..... 10 "
Gum tragacanth..... ..... ½ "—Mix.

The injections should be repeated every third day.

Dr. Mosetig Moorhof claims to have treated and cured twenty-three cases in this way. No symptoms of intoxication from the drug were observed.

The impregnation of the urine with antiseptic agents administered internally has come into use of late years, and has proven of considerable value in the treatment of chronic cystitis. For this purpose benzoic acid, the benzoates, boric acid, eucalyptol, lactic acid, salol, and other remedies are advocated. The most convenient and efficacious of all these is, in our opinion, salol. When given internally,

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it is split up into its component parts, carbolic and salicylic acids by the action of the pancreatic juice. These acids are then eliminated in the urine in combination with other elements, thus rendering the fluid antiseptic. Its action in preventing ammoniacal fermentation is certainly very marked. It is generally well borne, and does produce toxic symptoms. A fair average dose is ten grains three or four times daily. Much larger quantities may be given.

By the use of salol combined with lithia water to promote free action of the kidneys, we have in some cases been able to omit the use of injections entirely. It is also sometimes well to use some of the demulcent or terebinthinated vegetable diuretics before mentioned. These have the effect of diluting the urine, and possibly exert some therapeutic effect on the mucous membrane. In gonorrhœal cystitis, the fluid extract of pichi in large doses, frequently repeated, is recommended by some writers as highly efficacious. Desnos speaks highly of Venice turpentine made into pills with magnesia, as especially useful when other remedies are not well borne by the stomach.

The pain and tenesmus often require anodynes, which are best administered by suppository. The combination of opium and belladonna or opium and hyoscyamus with ichthyol (5-10 grains to suppository), we have found very efficacious. Hot poultices containing mustard, hot fomentations, wet or dry, and hot hip-baths are often valuable and useful in allaying pain.

The bowels are also to be kept open; if a laxative is necessary for this purpose, a saline mineral water is to be preferred.

In speaking of mineral waters, we should probably lay more stress than we have done upon the value of the alkaline or so-called lithia waters in the treatment of chronic cystitis. These waters are very valuable adjuvants, and more particularly when there is co-existing lithæmia, or renal complication. The great drawback to a more general use of these waters is the exorbitant price charged for the best of them. The above means are to be aided as far as

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possible, or as is consistent with general health, by rest, and proper attention to diet.

Tonics are often useful, the mineral acids of the tincture of iron and strychnine, being about the best. The mineral acids, however, are of little value when given for the purpose of lessening the alkalinity of the urine, for while they may render it slightly more acid, they do not acidify it. Moreover, alkaline urine rarely enters the body as such. When excreted from the kidneys, it is almost always acid, and becomes alkaline after entering the bladder. The mineral acids will not prevent this. Alkalinity of the urine requires such local and general treatment as has been before detailed. A vegetable acid, such as benzoic, or preferably, citric acid, is quite efficient in preventing or lessening alkalinity when due to phosphaturia. Hyper-acidity of the urine, on the other hand, is due to constitutional error, and requires specially general and hygienic treatment.

Change of climate is sometimes beneficial, specially when warmer regions for wintering are sought.

It does not seem easy to say anything in addition to what has been said in giving a general outline of the treatment of chronic cystitis. Further details, which may be applicable to the treatment of this disease, belong rather to the treatment of the affections which underlie the cystitis, save one other feature yet to be described as our *dernier resort*.

It not infrequently happens that cases of chronic cystitis are met with in which the disease persists in spite of all treatment, and great suffering is experienced, and life even threatened. The only thing now to be done, is to resort, as in the before mentioned condition due to prostatic enlargement, to an operation for draining the bladder. Various operative procedures have from time to time been advocated for the relief of these forms of cystitis, but practically, they may be narrowed down to perineal or supra pubic cystotomy. To-day, however, the weight of authority is more favorable to the high operation. This operation has several advantages. It allows easy and perfect examination of the interior of the bladder, the removal of any removable

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cause of trouble, and perfect drainage, with the assurance of complete rest for the bladder.

The chief contra-indications of this, or any operation for similar purpose, are renal complications, malignant neoplasms of the bladder, and a very low general condition. When the cystitis gives rise to great suffering, or in other words, there exists that special form which the French term *cystite douloureuse*, surgical intervention may be justifiable under any circumstances, except when there is advanced renal disease, as it is said that suffering is relieved as long as the incision remains open.

Our celebrated Southern surgeon, Dr. Hunter McGuire, is an earnest advocate of the advantages of the supra-pubic operation for drainage of the bladder.

There is a class of cases, says Dr. McGuire, in which the obstruction is great and fixed, micturition is frequent and difficult, perhaps impossible without the aid of the catheter. The introduction of this instrument grows more and more difficult; offensive residual urine is always present, and the general health suffers greatly. Cystitis, localized or general, is a painful and pronounced symptom. Violent tenesmus of the bladder, provoked by the obstruction, injures the vesical ends of the ureters; possibly a reflux of stale urine is driven into these canals, and ureteritis follows; then pyelitis and pyelonephritis, from which the patient dies.

It is to the relief, by surgical interference, of this class of patients that he specially calls attention.

In relating the circumstances that first called to his attention the value of the supra-pubic operation for drainage of the bladder, he says:

"In my first operation for stone, by this method, I found, when exploring the bladder with my finger through the wound, that the organ contracted with sufficient force to drive out every drop of liquid contained in it; and while I used, in this case, drainage tubes both through the wound and urethra, I took them away in a few hours, as they gave the patient a good deal of pain and annoyance. Since that case, I have never used drainage tubes, except to keep in the supra-pubic wound a soft gum catheter for two or three

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hours, to permit the wound to glaze before it was brought in contact with the urine which flows through it. I doubt, however, if this is even necessary. I have found that drainage through the wound above the pubis is as complete as drainage through the wound of lateral lithotomy, and there is no more need for drainage tubes in the one case than in the other."

In another paper on this subject, he says further:

"From my observation of drainage in the cases of supra-pubic cystotomy in the male, I find it more complete than in drainage after sections through the perineum. In theory it may not seem so, but in practice I have found it to be the case. The other advantages of supra-pubic cystotomy for drainage are apparent. The operation is simpler and far less dangerous to life than any cut into the bladder through the perineum. You go through parts less richly endowed with nerves, blood-vessels, etc.; if a fistula is left, and it is above the pubes, it is not constantly leaking, or as difficult to manage as a perineal urinary fistula, and there is no danger in supra-pubic cystotomy of urinary incontinence, which is often seen after perineal sections, and no danger of impotence, as I have once seen after the latter operation. In drainage through the perineum, the man remains on his back in bed, and a tube is kept constantly in the bladder. In the supra-pubic method, the man can often sit up in a week, or sooner perhaps, and do without the tube for several hours at a time."

Dr. McGuire's method of performing the operation is as follows:

"The night before the operation is to be performed a purgative should be given, and if this does not act well, the next morning an enema is employed to empty thoroughly the lower bowel. The parts about the pubes should also be shaved and well scrubbed with soap and water. Early in the morning of the day of the operation, a pill of quinine should be taken, and repeated every two hours, until fifteen or twenty grains have been administered, and slight cinchonism produced. After the anæsthetic has been given, and the patient placed upon the table, the parts should again be washed with green soap and hot water, a stiff brush being employed to make the cleansing thorough. The parts should then be bathed with a solution of bichloride of mercury 1 : 2000.

"The only instruments likely to be required are a scalpel,

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tenaculum and a pair of small forceps. These should be placed in a tray containing carbolic acid and hot water, 1: 40.

"The next step is to clean the bladder by washing it out with a weak solution of carbolic acid and hot water. A soft gum catheter is introduced, and the bladder is washed until the fluid returns free from sediment; in this way, the wound about to be made is kept from coming into contact with fœtid alkaline urine, mucus and pus, which the bladder often contains. Before removing the catheter, let all the fluid escape. An empty gum bag, which holds about twelve ounces of water, should now be well oiled, folded upon itself, and introduced into the rectum above the internal sphincter muscle. A skilful assistant should perform this office, saving the operator loss of time in cleansing and disinfecting his fingers after the bag has been introduced, and inject into it about twelve ounces of warm water. This should be done slowly and gently, and force avoided. The bag, when filled, pushes the bladder out of the pelvis and above the pubes If properly done, this lessens the danger and difficulty of the operation. The rectal distension is of great importance; if complete, it removes all danger of encountering the peritoneum. After the operation is completed, and the bag is removed, the bladder drops back into the pelvis. This makes the track from the bladder to the wound in the skin pass from below, upward and forward; and when the wound is reduced in size to that of the natural urethra, the fistula, or artificial urethra, has the same relation to the bladder that the spout has to the coffee-pot. If no rectal bag is at hand, I would use a pig's bladder, or distend the rectum with sponges; or an assistant with two fingers in the rectum, could push the bladder upward and forward. The next step is to fill the bladder with a weak solution of carbolic acid and hot water; probably it will hold six or eight ounces. The use of force should be even more carefully avoided here than in filling the rectal bag. If the capacity of the viscus has been diminished by disease, any attempt to enlarge it by forcible dilatation, is unjustifiable. As soon as the bladder is seen or felt above the pubes, the injection should cease. In some experiments made upon subjects with contracted bladders, I found, when the rectal bag was well filled, that the bladder became prominent above the pubes, when only two or three ounces of fluid were used. A catheter may be employed to inject the bladder, but I prefer simply to introduce the small noz-

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zle of a Davidson's syringe into the urethra—say one and a half inches—bend the penis slightly back toward the anterior abdominal wall, making thus a gentle curve of the urethra, and to send the water through this curve from the syringe into the bladder. As soon as any resistance is felt, or as soon as the bladder can be seen or felt, like a ball, above the pelvic brim, the injection should cease, even if there is little resistance. The penis should now be tied near its base with a piece of rubber tubing, or with a gum catheter, to prevent the escape of water, or an assistant may grasp the organ and hold it down between the patient's thighs, out of the way of the operator.

"Beginning now with the knife three inches above the upper border of the symphysis pubes, varying the length according to the amount of fat and thickness of the abdominal wall, a vertical incision should be made down to the pubic bone. This cut should pass through the skin, fat and cellular tissue down to the linea alba. The linea alba should now be divided, the incision through this structure being from one-half to three-fourths of an inch shorter than the one through the skin, but it should be carried down to the pubic bone, and the shortening be made at the expense of the upper end of the wound. Now, with the handle of the knife, separate the recti muscles until the transversalis fascia is reached. There is no necessity for dividing any portion of the attachment of the recti muscles to the pubic bone. Make the dissection vertically, and carefully keep in the median line. The transversalis fascia should now be caught with the forceps, nicked and divided with the point of the knife; if the operator prefers, he can divide the fascia upon a grooved director. The cut through this structure should not be over two inches long, but the division should be made down to the pubic bone. Again, with the handle of the knife, divide the fat and cellular tissue under the transversalis fascia, lying between it and the wall of the bladder. Be careful not to disturb this loose cellular structure any further than is absolutely necessary. Careless or rough manipulation here may lead afterward to urinary infiltration. The loose connective tissue, just behind the pubes, should especially be left undisturbed.

"In this space between the transversalis fascia and the bladder, sometimes, but not always, may be seen large and engorged veins. They, of course, should be avoided if possible; but, if cut, will cease to bleed when the bladder is

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emptied and the rectal bag removed. When the bladder is exposed, the tenaculum is passed through its walls, the viscus pulled a little forward and opened with the scalpel. The water will be seen escaping by the side of the tenaculum and the knife. In old cases of prostatic enlargement, the bladder walls are thick and tough, and cannot be stretched with the finger, as can the bladders of the young subjects, upon whom the high operation for stone is made.

"So, after the knife has entered the bladder, and is withdrawn, cut, in the median line, an opening large enough to admit the index finger of the left hand.

"Let the finger follow the knife quickly, so that it may enter the bladder and thoroughly explore it before all the water has escaped, and do not withdraw the tenaculum until the finger is fairly in the viscus. Make the opening in the wall of the bladder as low down as can be safely done. Let it be opposite the upper border of the pubes, and not higher. A soft gum catheter should now be introduced into the bladder through the abdominal wound, and the distal end of the catheter dropped into a cup placed at the side of the patient. If the catheter gives rise to vesical tenesmus, or is the source of annoyance to the patient, it may at once be removed; otherwise it will be better to let it remain some hours, for the sake of cleanliness, and to give the wound time to glaze. The wound is now simply covered with absorbent cotton, which should be changed as often as it becomes soiled. The patient can lie in any position he prefers, or change his position as often as he desires. The drainage of the bladder is complete, with or without the catheter, no matter what the position of the patient.

"In the supra-pubic cystotomies that I have seen, the loss of blood has been slight, and the shock of the injury has been trifling. In none of my cases have I encountered the peritoneum. After a few weeks, it will be necessary to keep in the artificial urethra a silver or hard rubber plug, for an hour or so every day, to keep it from closing."

In the *after-treatment* he keeps the urine acid with lemonade or citric acid, for as long as the urine is acid the wound is healthy, the urine being aseptic. In his papers on the subject, Dr. McGuire cites the history of numerous cases, proving the value of the procedure. He has kept the supra-pubic artificial urethra open for months, and in one case for two years. After the fistula is reduced to the size

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of the natural urethra, there is no dribbling of water, unless the bladder gets too full, and the man retains and expels it at will. The recti muscles keep the walls of the new urethra closed when not in use, and aid in preventing leakage.

It would be easy to note favorable opinions from other surgeons as to the value of the supra-pubic operation for relieving obdurate cases of chronic cystitis, but anything in addition would seem a useless waste of time and space. Let us rather conclude with a quotation from Sir Henry Thompson, the concluding words of his lecture on operative means for drainage of the bladder:

"I look forward, gentlemen, with more hope than at any former period of my professional experience, in the resources of our art for effectually relieving a class of cases by no means uncommon, but hitherto producing more suffering, at a late period of their history, than any others which come before us—cases of malignant disease alone excepted."

Appendix of Therapeutics and Formulæ.

We append under this heading some general information in regard to remedies advocated in the treatment of chronic cystitis, and some formulas:

Benzoic Acid—Dose, grs. 5–30. Useful for acidulating alkaline urine, and stimulating and disinfecting mucous surfaces. May be given in the form of sodium benzoate, dose, grs. 10–30; ammonium benzoate, dose, grains 5–30; or lithium benzoate, dose, grs. 5–20. It is well to combine both benzoic acid and the benzoates with sodium borate.

R. Acid benzoic..... ℥iij
Glycerine..... ℥iss
Mucilage acacia..... ℥ivss

Mix. S. Two teaspoonfuls three times daily, diluted freely with sweetened water, which may be advantageously flavored with spirits of cinnamon.

Benzoic acid is highly recommended by Gosselin and Robin for alkaline urine, whether due to ammoniacal fermentation or phosphaturia.

S. W. Gross' Prescription:

R. Copaiba balsam..... ℥iv
Acid benzoic..... ℥iss
Gum Arabic.....
Sugar..... aa ℥ij
Oil. gaultheria..... gtt. xx
Camphor water, q. s..... ℥viij

M. S.: Teaspoonful every four hours.

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℞ Acid benzoic .....
Sodium borate..... ..... āa℥ij
Infus. buchu..... .... ℥xij
Mix. S.: Wineglassful three or four times a day.

℞ Acid benzoic..... ..... gr. xv to℥j
Sodium phosphate..... ..... ℥iiss
Syrup. .... ℥vij
Water. .... ℥iij
M. S.: Tablespoonful three times a day.

℞ Ammonium benzoate ..... ℥iv
Sodium borate .... ℥ij
Fl. ext. Kava Kava.. .... ℥xviij
Fl. ext. eucalyptus..... ..... ℥vi
M. S.: Teaspoonful three or four times a day.

Copeland's Injection:

℞ Sodium benzoate..... ℥j
Tr. gelsemium..... .... ℥ij—iij
Water, q. s ..... ℥vj
M. S.: One ounce to be warmed and injected, and allowed to remain twenty or thirty minutes. Said to be an excellent wash in the painful cystitis of old men.

Boric Acid—Dose, grs. 5–20. Disinfectant, antiseptic and deodorant, arresting fermentation and putrefaction, and very destructive to low organisms. Useful both internally and as a wash. Prophylactic against urinary fever.

Borate of Sodium—Dose, grs. 5–30. Useful as an antiseptic wash. Increases the solubility of boric acid.

Boro-glyceride—Unofficial. Boro-glyceride, in aqueous solution 1–40, is a powerful antiseptic.

Formulæ:

℞ Boric acid ..... ℥j
Sodium borate..... ℥iss
Syrup Tolu..... ℥vj
Water, q. s..... ℥vj
M. S.: Tablespoonful every three hours.

℞ Sodium borate..... 1 part.
Syrup raspberry ..... 3 parts.
Infus. lactucarium.....
Infus. linden flowers..... ..... āa 8 parts.
M. S.: Tablespoonful every two hours.

Saccharin has also been recommended for the purpose of acidifying alkaline urine and preventing decomposition. It is a powerful antiseptic, and perfectly innoxious in reasonable quantities.

Lactic Acid—dose, one drachm—is sometimes used to prevent ammoniacal fermentation of urine, and is highly spoken of by some authorities.

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Eucalyptus Oil, tincture or extract, is also used for the same purpose, and has its advocates.

Alkalies. These are used when the urine is highly acid. The citrates, acetates, or bicarbonates are most used, and are advantageously combined with an alkaline mineral water, a vegetable diuretic, or both.

Vegetable Diuretics. Of these, the following are most useful in chronic cystitis:

Buchu. Stimulating diuretic. Fluid extract not miscible with water. Dose, 15–30 minims.

Cornsilk. (Stigmata Maidis). Demulcent, antiseptic, diuretic. Fluid extract is miscible with water. Dose, 1 to 2 drachms.

Couch Grass. (Triticum Repens). Demulcent and emolient diuretic. Fluid extract, miscible with water. Dose, one to six drachms.

Cubebs. Stimulating diuretic in catarrhal affections of mucous tracts. Doses, oil of cubebs 10 minims in soft capsules. Fluid extract, not miscible with water. Ten to thirty minims.

Kava-Kava. (Piper methysticum). Stimulant, tonic and diuretic. Renders urine very abundant and clear; relieves painful micturition. Fluid extract, not miscible with water. Dose, twenty to sixty minims.

Pareira Brava. Tonic and diuretic. Allays irritability of the bladder, and modifies profuse mucous secretion. Of established reputation in chronic affections of the urinary tract, attended with muco-purulent deposits in the urine. Fluid extract, not miscible with water. Dose, one drachm.

Pichi. (Fabriana imbricate). Diuretic, tonic and terebinthinate; useful in vesical catarrhs following mechanical causes. Modifies urinary secretion and calms irritability. Contra-indicated when there is organic kidney disease. Fluid extract, not miscible with water unless rendered alkaline. Dose, ten to forty minims.

Uva Ursi. Astringent and tonic, with specific direction to the urinary organs; somewhat antilithic; often combined with buchu. Fluid extract, not miscible with water. Dose, fifteen to sixty minims.

The turpentine preparations, the balsams and sandalwood oil are sometimes very useful, specially in gonorrhœal cystitis.

℞ Venice turpentine ....grs. xviij
Calcined magnesia, q. s.
M. Make capsules No. 12. S.: Four to six capsules a day.

℞ Terpin..... ...grs. xviij
Pulv. liquorice, q. s.
M. Make capsules No. 12. S.: Six to eight capsules a day.

℞ Terpinol
Sodium benzoate..... ..... aa grs. xv
White sugar, q. s.
M. Make capsules No. 10. S.: One every four hours.

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Formulæ for Injections:

R. Boric acid.. ..... 3iiss
Sodium borate..... ..... gr. xv
Water (boiling) .... ℥vij M.

Ricord's Injection:

R. Silver nitrate..... ..... grs. vij
Water..... .... ℥iiiss M.

Thierch's Solution:

R. Salicylic acid.. ..... grs. vj
Boric acid. .... grs. xxx
Water .... ℥vj M.

R. Boric acid..... 3ij
Chloral hydrate .... grs. xxx
Fl. ext. pinus Canaden.. ....3iij
Water..... Oj M.

R. Boric acid..... .... 3iss
Sodium borat ... . grs. xxx
Potassium chlorat 3j
Listerine 3xij
Glycerin .... ℥iv
Water, q. s..... Oj M.

Suppositories, Formulæ for:

R. Pulv. opium..... ..... grs. xlj
Camphor. ..... grs. xxx
Ext. belladon ..... grs. iij
M. Make six suppositories. S.: One as necessary.

R. Ext. opium..... .... grs. vj
Ext. belladonnæ... .... grs. iij
Ichthyol.... .... grs. xxx
M. Make six suppositories. S.: One as necessary.

R. Ext. opium..... ..... grs. vj
Ext. belladonna..... ..... gr. j
Ext. hyoscyamus .... grs. ij
M. Make six suppositories. S.: One as necessary.

R. Morphine hydrochlorate..... ..... grs. iij
Cocaine hydrochlorate..... grs. vj
M. Make six suppositories. S.: One as neeessary.

Iodoform may be added to any of the above formulæ in strength of three to five grains to each suppository.

Fomentations. Dr. Morris, of New York, recommends as the best fomentation in chronic cystitis, a leaf of tobacco, moistened in hot water, and applied over the bladder. Over this is placed a cloth wrung out in hot water, and oiled silk or paper over it to prevent evaporation. He also advocates the elbow-knee position as the best after the catheter is introduced into the bladder, as more residual urine can be removed in this position.

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Dr. Morris claims to have made an addition to McGuire's operation which we cannot detail here. His account of it will be found in the *New York Medical Journal* for July, 1890.

Thompson's Formula:

R. Liq. potasse .... ℥ij—iv
Ext. hyoscyami ..... grs. xx—xl
Syrup. aurant cort ....
Aquæ cinnam ..... aa ℥iij
(or Mist. acaciæ ....
Aquæ .... aa ℥iij)

M. S.: Tablespoonful, in some diluent, every eight hours.

For information in regard to catheters, other instruments and apparatus, see Tiemann's *Armamentarium Chirurgicum.*

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Dr. I. N. Love, editorially, in *Medical Mirror* (after stating its composition as given in the advertisement of this remedy), says that "in urgent cases (of uterine disease), with much pain, it should be given every hour or two in half a glass of hot water"—the *ordinary* dose being a dessertspoonful to a tablespoonful three times daily after meals.

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ART. II.—Nervous Troubles following Organic Urethral Stricture.*

By HUNTER McGUIRE, M. D., LL. D, of Richmond, Va.

EX-PRESIDENT, AND HONORARY FELLOW OF MEDICAL SOCIETY OF VIRGINIA, ETC., ETC.

CASE I.—Many years ago, during my early professional life, I was attending a case of stricture of the urethra, of eight or ten years' standing. Gradual dilatation was the method employed. The process was, of course, a slow one; and when the stricture was only partially dilated, the patient left me. He was satisfied with the improvement, and content to let the stricture alone. I heard no more from him for five or six years, when I was told that he had a very peculiar attack. Without any warning, the index and middle fingers of the left hand became purple and devoid of sensation; the fingers looked livid and shrivelled. He had no headache, and, in all other respects, appeared well. This strange condition lasted for a few days, and then, gradually, but completely, passed off, and for six months he had no further trouble, except that his stricture gave him more and more inconvenience, particularly so during the attack of his fingers. At the end of six months, hemiplegia came on, and in two or three weeks, he died in a state of profound coma. Between the two attacks there was no evidence of cerebral mischief. He was a prominent lawyer, and attended to his arduous work without any difficulty. His friends said that he had occasional spells of mental depression, which they attributed to the strange and unaccountable attack of his fingers. During the interval between the attacks, he consulted two eminent physicians of New York City, who told him that he needed no treatment, and sent him home with, as he expressed it, "a clear bill of health." He had, when I treated him, no renal trouble, and probably had none in the last attack, or it would have been discovered by the very clever men who attended him.

CASE II.—Some years ago, Judge B., a lawyer, æt. 55 years, came to me with stricture of the urethra, which he would only permit me to treat with bougies and gradual dilatation. After partial improvement and diminished inconvenience, he was satisfied to let it alone for the time. He promised to go on with the treatment in a month or

*Read before the Medical Society of Virginia, at Rockbridge Alum Springs, September 4, 1890.

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two, but he never did. About two years after this, he sent for me, and told me that he staggered as he walked on the pavement; that the side-walk appeared to rise up before him, and that he began to walk as if climbing up a steep hill, although the ground was level. These symptoms disappeared under some simple treatment. At this time, there was no albumen in his urine, and no signs of disease of the kidneys. Two months after this attack, while he was in another part of the State, he was suddenly paralyzed, and died in a few hours.

CASE III was that of a gambler, æt. about 60. Had stricture, following gonorrhœa, fifteen years ago. Two years before he fell in my hands, was operated on in New Orleans for external perineal urethrotomy. I found, on examining him, he had a pretty tight organic stricture in the membranous portion of the urethra. From the expression of his face, defective memory and other symptoms, he looked as if he had the beginning of cerebral softening. After pretty rapid, but gradual, dilatation, the size of the canal was made larger, symptoms of stricture less urgent, and brain symptoms improved. Owing to the hot weather, he left the city for the country, intending to return in the fall and renew the treatment. During his absence, an attack of apoplexy killed him in a few hours.

CASE IV.—I relieved a gentleman of a stricture confined to the urethra in the glans penis. I advised the patient to occasionally introduce a sound through this portion of the tube, to prevent the stricture from reforming. He neglected to do this, and, several years after, told me that he thought that obstruction was coming back, and that he would come to see me in a few days. I met him accidentally about a year after, when he again informed me that the stricture gave him a good deal of annoyance, and he would come to see me The next time I heard of him, one side of his body was paralyzed, and he was being treated by another physician. About six months after, another stricture came on, and he died. I know nothing of the treatment he received, or the state of his kidneys.

CASE V.—I cut a young man from North Carolina for stone, about five years ago. He was nursed by his brother, a healthy-looking farmer, who, one day, informed me that he had urethral stricture. I examined him, found an organized stricture in the membranous part of the tract, and advised treatment. He promised to come back to see me, but put it off from time to time. Six months ago he came

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to see me with his family physician. They informed me that he had been apparently well, attending to his duties on the farm and other things, when suddenly, one day, he was seized with a violent pain in his head, and lost the power of speech. He could not articulate a word. He could communicate with his family by writing, but this was imperfectly done, and was not always intelligible. This condition lasted for two or three days, when the power of speech returned; even then, he used the wrong words in speaking—when he asked for water, for instance, he would call it by some other name. When he came to see me, he had improved, but he still miscalled things, and his mind was not altogether right. Remembering the gentleman, I asked about his stricture. He did not suppose it had any connection with the symptoms he had given me, and did not mention it until I asked about it. The stricture had gradually grown worse, and given him a good deal of trouble. I cut his stricture, and introduced a full-sized bougie, and in a few days sent him home. Since then he has been well, but the case is too recent to say what will be the ultimate result. There was no sign of renal disease.

I could add other cases, similar in character, to these, that I have reported, but it is unnecessary.

I have repeatedly seen cases of so-called spinal irritation relieved of all spinal symptoms when urethral strictures were cured.

I have seen sclerosis of the anterior or posterior or lateral columns of the cord follow long-existing organic urethral stricture.

Are all these cases mere coincidences? Urethral strictures are so common, and disorders and diseases of the nervous centres so frequent, after middle life, and the interval of years between the formation of the stricture and the appearance of nervous trouble so great, that it is difficult to say, with certainty, that one is dependent upon the other. It will take the combined experience of many observers to determine this. As it is, however, I cannot help thinking that long-existing urethral stricture may set up reflex irritation in some one or more of the great nervous centres, and this, persisting, ends in pathological change, in one form or other.

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Art. III.—Veterinarians on Boards of Health.

By W. H. HARBAUGH, V. S., of Richmond, Va.

Not many years ago, the mere suggestion of having a "horse doctor" associated with intelligent physicians on boards of health, would have raised such a storm of indignation among the members of the medical profession, that it would have literally damned the person who had the temerity to propose such an innovation.

Things have changed. The "horse doctor" is certainly disappearing, like his prototypes—the Indian medicine man and the old woman with a charm. The "horse doctor" is being slowly, but surely, succeeded by the educated veterinarian, in the same manner as was the barber-surgeon and prescribing apothecary succeeded by the medical doctor.

Twenty-eight years ago, there was practically but one veterinary college on this continent, and that one was located in Canada. At present there are many successful veterinary institutions in the United States. Our greatest universities have veterinary departments conducted on the same plan as, and in conjunction with, their medical departments. Harvard University, the University of Pennsylvania, the University of New York, Cornell University, and others, are annually graduating veterinary surgeons. At Montreal, the McGill University is doing good work in educating veterinarians. At Toronto, the Ontario Veterinary College has an annual attendance of over four hundred students.

It is true that the illiterate "horse doctors" are still to be found in every community; and it is also true that in this and many other States, they are allowed to assume with impunity, the ancient and honorable title of the veterinarian; it is nevertheless a fact that the qualified veterinarian is gradually winning renown, and demonstrating his right to be recognized as a useful and necessary member of the great family of scientists.

It must be admitted that many graduates in veterinary

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medicine never attain mediocrity in their profession. But such is the case in all professions. At the same time, it must be borne in mind that some of the brightest lights in the great field of original investigation are veterinary surgeons. The lamented Bouley who, by his untiring zeal in improving the knowledge of the medical world, finally gained that eminence coveted by every great Frenchman—the presidency of the "Immortal Forty"—the Academy of Sciences. He was a veterinarian, the director of the veterinary school at Alfort, near Paris. When the celebrated names of Koch and Chauveau are mentioned, it is seldom called to mind that Chauveau is a veterinarian. Fleming is a veterinarian. In Europe, the veterinarian has a standing equal to that of a member of any other learned profession, and, as a result, he becomes eminent according to his attainments. He is placed on government boards of health and in other positions where he can do honor and credit to himself, as well as uphold the standing of his calling. In this country, he is fast approaching a similar position. Already the names of veterinarians are becoming known in connection with bacteriological investigations of importance. Dr. Salmon, the Chief of the Bureau of Animal Industry, now occupies a position in this field that is second to none.

The field of pathology is broad. To the pathologist, disease is disease whether it is found in the higher or lower animal. The opportunity of the veterinarian to study pathology *post-mortem* is obviously greater than that of the medical doctor, simply because his work is before him; all he has to do is to get there before the buzzards. For this reason, the information that could be obtained through him could be made of vast importance in those cases where the animal has been suspected of being affected with a disease that is transmissible to man.

That branch of science termed hygiene is directly of much importance to the public, as well as to the medical and veterinary professions. Whose opportunities are so great as those of the veterinary practitioner to discover mal-hy-

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gienic conditions? He visits the alleys, back-yards, stables, cow-pens. He often finds stables so filthy that he refuses to accept the case until they are cleaned and made fit to enter. (In fact, such an instance was the instigation of this article. The writer was called to attend a wounded horse. When the door of the stable was thrown open, he was met by such a foul stench that it forced him to retreat into the yard. There were no windows in the stable, and both doors were tightly closed. The stable contained two horses. The liquid and solid manure was trampled into a mixture and piled up all around the animals. As may be readily supposed, the wounds were in a fearful condition.) The many cases of *purpura hæmorrhagica* met with by the veterinary practitioner, is an evidence of bad hygienic surroundings.

Many diseases are communicable from the lower animals to man. When such diseases exist in the community, should not the board of health be cognizant of them, and be clothed with authority to prevent their spread?

If it is admitted that tuberculosis may be transmitted from the cow to man, would it not be a great step in advance of existing arrangements for the board of health to know that in a certain herd or dairy one or more animals were affected with tuberculosis?

In cases where glanders is discovered in a horse, should it not be the duty of the board of health to condemn the horse, and enforce sensible disinfection of premises as a preventive measure against the spread of the disease, as well as to guard against the probability of one or more human beings contracting that loathsome and fatal malady?

Suppose an outbreak of trichiniasis; would it not be a farce for the meat inspector (who is most probably a butcher) to look for the parasite in the pork exposed for sale? The veterinary member of the board of health (with his microscope) is the proper person for such work.

Occasionally, the community is startled with a "mad-dog scare." A pet canine or a homeless cur has a "fit;" some one says: "Mad dog." Immediately, there is much excitement, the poor brute is chased from one end of town to the

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other; he is clubbed, stoned, and driven wild with fear, until out of sheer desperation, he turns and snaps or bites some person whom he rightfully or wrongfully supposes to be one of his tormentors. That is the end of that dog's career. He is shot. The bitten person becomes a hero; a subscription is taken up, and he is sent either to New York or Paris to undergo *Pasteurization;* and if he survives in spite of fright and Pasteur, he lives to be pointed out as the man "bitten by a mad dog." Would not it be better to have the dog caught and caged so that he could be intelligently examined and observed by the veterinary member of the board of health, when it could be satisfactorily proved that the dog was not "mad," but was subject to epilepsy, or chorea, or vertigo, or had had an attack of colic or indigestion?

Sufficient has been said to show the importance of the subject. As a matter of course, it will take time before such ideas will be adopted, as the laws must be made applicable; but, in spite of prejudice, the day is not far distant when *all* State and city boards of health will have at least one member who is a graduated veterinarian, who will be qualified at the same time to fill the office of meat and milk inspector.

Clinical Reports.

Delivery of a Nearly Normal Placenta a Year After Abortion.

By J. WILTON HOPE, M. D., of Poquosin, York Co., Va.

The following rather unusual case came under my observation in the winter of this year, and, being something out of the ordinary run, I kept a record of it as follows:

I was consulted by Mr. R. in regard to his wife's condition. Previous history given as follows: January, 1889, being three months advanced in pregnancy, she was suddenly taken with hæmorrhage and other symptoms of abortion. Dr. K. was called in, and the case went on to recovery without abortion, as they thought, although I was of opinion

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that abortion did take place, judging from the apparent condition of the patient.

Six months after this date I was consulted in regard to an obstinate leucorrhœa, and, in detailing her symptoms, she informed me of the above referred to occurrence. As she objected to an examination, I prescribed some astringent injection and a tonic, and directed the husband to apprise me of the result of treatment.

She was reported to me as improving, although the discharge had not entirely stopped, but it was not sufficient to cause any annoyance. Strength and general health much improved.

I was sent for very hurriedly by Mr. R., who said his wife "was flooding and very weak, and he supposed she was going to have another miscarriage." She had previously had two miscarriages, and also three children living. When I arrived, I found she had passed a few small clots, but no blood of any amount, as the cloth was only slightly stained, her husband in his anxiety having exaggerated the case. She was annoyed by bearing-down feeling, pain in back and abdomen and other symptoms of abortion. I was very confident up to this period that she was not pregnant, but was almost compelled to think I had been mistaken. I prescribed the usual remedies in such cases, and as she was much relieved and fell into a sound sleep, I left with instructions that if any untoward symptoms supervened I was to be called immediately. I called the next morning and was told by Mrs. R. that she had passed "that thing," as she called it, early that morning. (Here I may state that the patient strongly asseverated that she was "not as she usually was" during the whole time). Upon examination, "that thing" proved to be a placenta about four inches in diameter; the margin, the region of attachment of the membrane, was partially decomposed, and had furnished the discharge, which stopped as the membranes gradually liquefied and came away. The placental mass proper was in a good state of preservation, and on the attached side was much the same as a normal one. The fœtal surface contained distinct remains of the veins, so prominent in the recently delivered normal placenta, which converged to a point where the cord had been attached, and where a fibrous cord of half an inch in length and one-eighth in thickness was all that remained. Upon section, the remains of the placental tufts were easily recognized. It was as entire as if it had been preserved, only differing from a

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normal afterbirth in that it was more consistent and fibrous in feeling and appearance than normal.

Now this was, undoubtedly, the placenta left from the abortion twelve months previously, and it must have increased very much in size after the expulsion of the fœtus.

Was the fact that no serious after-effects followed due to the fact that the placenta was adherent, and still drew its immediate nourishment from the uterine surface?

Was its increasing bulk the cause of its final expulsion?

What produced this marked tolerance of a foreign body in a uterus, which on two previous occasions had been prematurely relieved of its contents?

Proceedings of Societies, Boards, etc

MEDICAL SOCIETY OF VIRGINIA.

The Twenty-First Annual Session of the Medical Society of Virginia convened at the celebrated health and pleasure resort, Rockbridge Alum Springs, Va., Tuesday night, September 2nd, 1890, and adjourned Thursday night to partake of a magnificent banquet tendered by the Springs Management to the Society, its guests and visitors, and all the ladies accompanying the doctors. A feature of this banquet was that it was without wines, except as they were ordered by individuals; and it is worthy of remark that it was the common sentiment of all who enjoyed the hospitality of the banquet that they had never had a more agreeable and pleasant time on such an occasion. It proves conclusively that a magnificent, and, in every way, a most satisfactory banquet can be most heartily enjoyed when wines are not on the bill of fare, especially if, as on this occasion, the fresher, brighter spirits of beautiful women lend the presence of their charms.

The session was called to order by the President, Dr. Oscar Wiley, of Salem, Va. Beside him, and the Secretary, Dr. Landon B. Edwards, of Richmond, Va., there were seated on the stand each of the ex-Presidents of the Society who was present, and the following invited guests: Drs. Landon Carter Gray, of New York city; Joseph Price, and Joseph Hoffman, of Philadelphia; Edwin Ricketts, of Cincinnati,

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and George Herndon, of the United States Navy. Among other distinguished visitors at the Springs, to whom the same compliment was extended, was Gen. Joseph E. Johnston.

After prayer by Rev. Dr. E. F. Garrison, of Philadelphia (who was a visitor for his health at the Springs), and the cordial *Address of Welcome* on the part of the Rockbridge Alum Springs Company by the Resident Physician, Dr. J. Edgar Chancellor, of University of Virginia, Dr. John S. Apperson, of Marion, Va., delivered the *Annual Address to the Public and Profession*, pressing the claims of regular Medical Societies upon the favorable consideration of the educated public.

The Committee (consisting of Drs. J. Edgar Chancellor, J. M. Estill, of Tazewell C. H.; H. Grey Latham, of Lynchburg; Geo. Ben. Johnston, of Richmond, and L. Ashton, of Falmouth), appointed to examine the Essays which had been presented in contest for the "*Dr. Hunter McGuire Prize of One Hundred Dollars*" *for the best original Essay on "The Diagnosis, Pathology, and Treatment of Chronic Cystitis in the Male,"* after a careful examination of each of the seven papers before them, awarded the merit to the Essay signed "Causa cessante, cessat effectus." On opening the envelope corresponding to this motto, the author was found to be Dr. R. M. Slaughter, of Theological Seminary, Virginia. [This Essay is published in full in this issue of this journal, and will also appear probably in other journals, as also in the *Transactions* of the Society.]

Honorary Fellow and Ex-President Dr. Hunter McGuire, who was present, after the prize was awarded by mail (as the author was not in attendance), authorized the announcement that he would award another prize of $100, during the next annual session of the Society, to the practitioner residing in West Virginia, Virginia or North Carolina, who would present the best original Essay on some subject, soon to be determined on, and to be announced through the office of the Secretary of the Medical Society of Virginia. All Essays offered in competition must be regarded as the property of this Society until disposed of by it or its Publication Committee.

On motion of Honorary Fellow, Dr. S. K. Jackson, of Norfolk, Va., a unanimous vote of thanks was given to Dr. McGuire in recognition of his special favor to the Society in giving the prize and in making this Society the special beneficiary.

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The resolution offered by Dr. Jacob Michaux, of Richmond, Va., making it a prerequisite for Fellowship in the Society, that every future applicant shall be a graduate of a reputable Medical College, was adopted.

A resolution proposing that the Society shall meet hereafter annually in Richmond was tabled.

SECOND DAY—*Wednesday Morning, Sept. 3rd.*

At 11 o'clock, Vice-President, Dr. J. M. Estill, of Tazewell C. H., Va., was called to the chair, and the President, Dr. Oscar Wiley, proceeded to deliver the *Address of the President*, which was well-received, and full of good suggestions for the profession generally.

Dr. Hugh M. Taylor, of Richmond, Va., introduced a resolution proposing to do away with the system of appointing reporters on advances in each of the eight divisions of medical sciences, and that, in lieu thereof, some subjects be annually selected for discussion, appointing a number of Fellows to report on various divisions of the same subject at the subsequent annual meeting, so that the several reports or papers by the different Fellows, when systematically arranged for publication in the *Transactions*, will, practically, form one continuous treatise on the respective subjects so chosen for discussion.

After a lengthy discussion, the whole subject was referred to a committee, to consider the subject and report upon the advisability during the next annual session.

The next order of business was the discussion of the regularly announced subject for general discussion:

Treatment of Summer Diarrhœa of Children.

[The appointed Leader, Dr. C. T. Lewis, of Clifton Forge, Va., did not arrive till night, but in order that the report of the discussion may appear connectedly, we make here a synopsis of his paper.]

Dr. Lewis began by stating that we cannot over-estimate the importance of diet in the treatment of this disease, and yet many seem indifferent to its effects. Over-feeding the infant is a common cause of the disease. A goodly portion of the over-much food passes into the bowels, where it ferments and putrefies, resulting in the characteristic diarrhœa. But he has seen as bad cases of summer diarrhœa in children nursing their mothers as from the bottle. That the trouble is due to teething is all bosh, in his opinion. It should be remembered also that cow's milk is different in composition in different sections, due to climates,

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but especially to the different qualities of herbage, etc. The using of malt in infant's food is based on an error. When malt sugar is added to milk and fed to babies, a putrid and acid fermentation takes place, coagulating the casein into hard lumps, which produce vomiting and purging. As to treatment of the disease, it is evident that more depends on attention to the diet than upon the administration of drugs. If the disease occurs in a child at the breast, correct the mother's health so that the milk she furnishes will be all right, and the child will get well. If in a bottle-fed young child, never give milk from an old, almost dry cow. The milk should be from a young, fresh, perfectly healthy cow, grazing on grass, and having fresh running water to drink; and the teats should be freshly washed before milking. As soon as he is called to a case, he stops all food for eight or ten hours, and gives every two hours for three doses, one grain each of calomel, powdered rhubarb and calcined magnesia. If the baby is vomiting, he substitutes bismuth sub-nitrate for the rhubarb. By the time (in about ten hours) the bowels show evidence of action by this medicine, he gives a teaspoonful of chicken jelly (made by breaking the bones and thoroughly stewing the chicken) in about two tablespoonfuls of hot water, with a little rice in it. This he gives every hour and a half or two hours, and five drops of the following: Dilute muriatic acid, ℥iss; lactic acid, ℥j; pepsin sacch., ℥iss: glycerin, ℥iv; aquæ, q. s., ℥ij.—Mix. After keeping the baby on the chicken jelly for twenty-four hours, give milk from a young fresh cow, to which is added peptogenic milk powders, without boiling the milk. Also keep up the acid preparation. Do not give more than two ounces of milk in two hours. If the child suffers great pain, he gives laudanum; if very nervous he gives five to ten drops of Peacock's Bromides with laudanum.

In the paper read by Dr. J. N. Upshur, of Richmond, he referred to age, hygienic surroundings, atmospheric influences, heredity, dentition, weaning, foreign bodies, diet, feeding, the exanthemata, etc., as causes of summer complaint. Perhaps the most frequent cause is some error of diet. Of course the mother's milk is best. But when that cannot be relied on, select milk from a herd of cattle rather than from a single cow. In cities, it is best to depend on good condensed milk, freshly prepared for the baby as needed. He opposes the use of all artificial foods. When milk diet does not agree, give exclusively animal broths—

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resort being had in extreme cases to Valentine's Meat Juice. Use alcoholic stimulants when necessary. As to medicines, at the outset remove all irritants in the bowels by a dose of castor oil. If, after this, the actions are too frequent, give a mixture of sub-nitrate of bismuth and carbolic acid in thin gum acacia mucilage. But if the bowel discharges continue sour, thin and of a dirty color, give calomel and bicarbonate of soda until the actions diminish in frequency and resemble boiled spinach. Afterwards use a leading astringent. If the diarrhœa is kept up by weakened digestion, give pepsin and pancreatin with tonics. To cool the surface, use baths—warm or cold—as best suited to the sensibilities of the patient. Arsenite of copper, in doses of about one-three-thousandth of a grain, is highly spoken of as a remedy for the disease under discussion. Change of air is also often essential.

Honorary Fellow, Dr. J. Edgar Chancellor, remarked that an important point had been omitted in the paper, and that was the value of a radical change of diet. After going the rounds of all the different preparations of medicines and of milk, he has snatched children apparently from the grasp of death by an entire change of diet. In some cases, he has taken them off milk entirely, and found Valentine's Meat Juice a most valuable substitute. He referred to a case that was brought to the Rockbridge Alum Springs. The life of the child was ebbing away from inanition caused by summer diarrhœa. The stomach also was rejecting the usually prescribed "Infant's Foods." He applied spiced poultices—an old woman's remedy—over the abdomen and gave a sort of jelly or soup made by taking a chicken, properly cleaned, etc., and breaking the bones and pounding the meat, and then simmering the whole down to a thick soup, which, on standing, becomes jelly-like in consistence. In the morning, after having allowed the child to eat freely of this chicken tea or jelly, it was greatly better, and it rapidly went on to recovery. He spoke of this case simply to emphasize the value of a change of diet.

Dr. Wm. W. Parker said that some of the best authorities advise us never to blister a baby. But he knows that he has done good in the very class of cases under discussion by using fly blisters. However, for infants under a year old, never let the blister remain on over an hour or an hour and a half at most. The least tinge of redness is a sufficient indication for him to remove the blister applied over the stomach. By the proper use of blistering plasters,

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he has stopped emesis when other remedies have signally failed.

Dr. Thomas J. Riddell, of Richmond, Va., said that as a result of his twenty odd years of practice, he had learned that some children will get well on one line of treatment while others on the same plan will die. As to blisters, he has been afraid to use them on children who were already too much prostrated by the summer diarrhœa. Generally speaking, the proper proportions for the individual case of lactopeptine, calomel and Dover's powder act like a charm. Baths are also useful to reduce the fever and to refresh the feelings of the child. Meat juice is excellent when, for any reason, milk fails to be properly digested. But as to diet, his advice is always to discriminate according to the peculiarities of each case. Such discrimination is generally only to be made after testing the special article of diet. Turpentine applications, suitably mollified by mixture with oil, etc., are good when counter-irritation seems to be needed.

Dr. J. S. Wellford, of Richmond, Va., remarked that it is evident that this discussion is taking a wider range than the title would justify. Two diseases have been confounded —one, ileo-colitis of children, and the other, the true summer cholera of children. Physiologically speaking, up to about eight or ten months of age—in other words, until teething has well begun—it was evidently intended that the infant should live only on animal diet, such as is supplied by the mother's milk; and any other diet than milk and water is poisonous. In cholera infantum, he believes any artificial food is poisonous. But after the teeth have been cut, then should the child be gradually allowed to go upon an omniverous diet. Then the salivary glands begin to act, and their secretion is an essential help to the digestion of other food than simply the mother's milk; then it is time to let the child begin to eat. It is a crying sin of the day that the present generation of women are degenerating as to the development of their mammary glands. Mothers are neglecting their matronly duty of nursing their own children. Doctors should teach their lady patients that they are risking the lives of their infants by yielding to the false demands of society in allowing their milk to dry up prematurely. But some mothers are not blessed by nature with nursing powers. Their breasts will not develop so as to secrete milk. In such cases we have to seek nourishment for the child from some other source. If a suitable wet

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nurse cannot be provided, we should not lose sight of the requirement of nature, that up to the teething age, the strictly animal diet is required, and this must be given as nearly as possible in a perfect solution. When cow's milk will not suit, give soup—chicken or beef, etc. He referred to a gentleman now about to become a doctor that he remembered well who was raised on soups. As to cow's milk, one healthy cow is like another. Caution should be exercised in selecting milk, as much as possible, from a cow with its calf of relative age with the child. Some years ago, Prof. V. C. Vaughan, of Ann Arbor, Mich., discovered tyrotoxicon in cheese. Dr. Wellford wrote to him, suggesting that probably the same poison would be found in milk in certain stages of decomposition, and soon afterwards tyrotoxicon was also found in milk that had been allowed to stand in a warm place. All animal tissues undergo decomposition. Leucomaines are the result of changes in living bodies, while ptomaines are developed in dead tissues. Dr. Vaughan has showed that when milk is warmed, and put with an animal element of any kind, tyro-toxicon is developed. But if milk is put in a clean open vessel, and allowed to lose its animal warmth gradually, tyro-toxicon is not developed. He referred to some cases of cholera infantum that had developed in some of his family practice. The children had not been allowed to eat anything more than milk and bread; but the milk used by each infant had been bought from the same dairyman. This dairyman, as was conclusively proven, had not been sufficiently careful in cleaning and removing all traces of decomposing milk from his cans. Let it be emphasized that cholera infantum is not a disease in the ordinary sense of the term, but a poisoning that can be prevented. As a rule, there is too much casein in condensed milk for general adoption. It is best to take a pint of fresh cow's milk; let it stand for three hours, and then remove the upper third. Then mix the lower two-thirds with such proportions of water and sugar as may be necessary to suit the individual age of the child—such as will make it most nearly alike the milk of the mother at the given age of her child.

Dr. Thomas J. Moore, of R.chmond, Va., was interrupted in his remarks by the announcement of dinner hour, after stating that the range of discussion had included at least four distinct conditions: (1.) Ordinary indigestion; (2.) Cholera morbus; (3.) Acute summer diarrhœa of infants, without distinct pathological lesion; and (4.) Genuine cholera infantum, with its distinctive lesions.

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[During the night's session, Dr. C. T. Lewis read his paper (already referred to), and then followed a renewal of the discussion.]

Dr. J. N. Upshur, of Richmond, Va., in speaking of the causes of the summer diarrhœa, said they were (1) summer heat, and (2) wrapping the children up in too much clothing for the season. He reported a case in which he found the child wrapped up to the neck in a great amount of flannel cloths. He at once ordered all this excess of clothing to be removed, and had the child placed by the side of an open window, and the patient immediately began to revive. He criticised Dr. Lewis' paper because of its recommendation of certain proprietary remedies. He opposes the use of every form of proprietary preparations, and he will never lose an opportunity to denounce them. It is not pepsine which does the good work in digestive troubles, but pancreatine. Peptogenic milk foods have all proved failures in his hands—they invariably become bitter.

Dr. C. T. Lewis, in reply, mentioned two cases in which mother's milk did not agree with the infants; in fact they were dying of starvation. He put them on peptogenic milk powder with the happiest results. Scaled pepsin becomes gummy. But saccharated pepsin is the form best adapted for general use.

Dr. Wm. W. Parker, of Richmond, Va., stated that he had much experience in peptonizing milk. He does not consider the bitter taste a solid objection to its use, as that can be easily overcome by the addition of a sufficient quantity of sugar. It is much superior to plain cow's milk in many cases. He mentioned the case of a man who lived and recovered from a severe gastric trouble on no other diet than *peptonized* milk; but he could not digest plain cow's milk.

Dr. B. L. Winston, of Hanover C. H., Va., said the summer diarrhœa of children is due to summer heat and great humidity of atmosphere. Under said circumstances, the addition of the physiological process of teething may be also spoken of as a cause. As to treatment, it should be in great measure hygienic. Very little medicine is necessary. Change of climate and clothing is often essential. He asked Dr. Lewis the composition of bromidia. On receiving his reply, Dr. Winston said he did not think we should prescribe preparations which our druggists cannot compound, because we are thus prescribing agents or medicines of which we do not know the composition. He then con-

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demned the endorsement too common by reputable physicians of proprietary preparations in general.

Dr. J. E. Copeland, of Rectortown, Va., has used salicylic acid with good results in the treatment of this disease. Attention to diet is an all important matter. He reported a case of cholera infantum occurring in a neighboring village which he cured by the plentiful use of fresh clabber.

Dr. E. T. Brady, of Marion, Va., highly recommended the application of cold water by various methods. Lavage is now the common manner of using water.

Dr. F. James Taylor, of Walthall's Store, Va., said the causes of summer diarrhœa of children are many and different. He highly recommends enemata of quinia and opium.

Dr. Jacob Michaux, of Richmond, Va., thinks that water should be given plentifully to supply the great waste of the watery elements of the body lost by vomiting and diarrhœa.

Dr. Parker thinks that as milk is nine parts water, a child gets plenty of water who takes milk abundantly. It is perfectly clear to his mind that the disease under discussion is caused by the effect of summer heat upon the brain and nervous system, from the fact that we so often observe nervous symptoms manifesting themselves during an attack. His treatment consists in first washing the face, so as to accustom the child to the cold application, and then keeping thin wet clothes upon the head—a nurse sitting by to see that they do not dry. He has seen the hot head become pleasantly cool by this treatment in from thirty to forty minutes. He ties long stockings on the feet and legs in addition.

Dr. Jacob K. Simmons, of Obenshain, Va., was surprised to hear opium recommended for this disease. He would be afraid to prescribe it.

Dr. H. B. Anderson, of Hewlett's, Va., was surprised that none of the speakers had referred to the fact that the improper diet of mothers led to many cases of infantile summer diarrhœa.

Dr. Lewis, in closing the discussion, said that in reality he uses as little medication as possible—but depends mostly upon hygienic measures throughout the disease.

The Afternoon Session was taken up in the election of officers, etc., with the following result:

President.—Dr. William W. Parker, of Richmond, Va.

Vice-Presidents.—Drs. John W. Dillard, of Lynchburg, Jacob Michaux, of Richmond, and H. M. Patterson, of Staunton.

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Recording Secretary.—Dr. Landon B. Edwards, of Richmond, Va.

Corresponding Secretary.—Dr. J. F. Winn, of Richmond, Va.

Treasurer.—Dr. Richard T. Styll, of Hollins, Roanoke Co., Va.

Committee on Nominations for Fellowship.—Drs. Wm. D. Turner, of Ferguson's Wharf, R. M. Slaughter, of Theological Seminary, I. S. Stone, of Lincoln, A. S. Rixey, of Culpeper, and G. M. Nickell, of Millboro Depot.

Executive Committee.—Honorary Fellows Drs. Hunter McGuire, of Richmond, and J. Herbert Claiborne, of Petersburg, Drs. H. M. Nash, of Norfolk, Thomas J. Moore, of Richmond, and M. D. Hoge, Jr., of Richmond—the Recording Secretary and the Treasurer, *ex officio* members.

Committee on Publications.—Drs. Hugh M. Taylor, J. F. Winn, and M. D. Hoge, Jr., all of Richmond—the Recording Secretary and the Treasurer, *ex officio* members.

Necrological Committee.—Drs. Thomas J. Moore, of Richmond, Herbert M. Nash, of Norfolk, John S. Apperson, of Marion, G. M. Nickell, of Millboro Depot, and Thomas W. Smith, of Bethel Academy.

To deliver the Address to the Public and Profession during Session of 1891.—Dr. Chas. M. Blackford, of Lynchburg, Va.

Subject for General Discussion during Session of 1891:—Acute and Chronic Dysentery.

Leader of the Discussion.—Dr. P. B. Green, of Wytheville, Va.

To Fill Vacancy on Board of Medical Examiners occasioned by Resignation of Dr. Peek.—Dr. Alfred C. Palmer, of Norfolk, Va.

Place of Meeting of Twenty-Second Annual Session.—Lynchburg, Va., during October, 1891—the exact day to be appointed by the Executive Committee.

Reporters on Advances in the various branches of medical sciences, and all other committees and special appointments will be announced through the *Transactions*.

During the Night's Session, in the Section on

Advances in Ophthalmology, Otology, and Laryngology,

Dr. Robert L. Randolph, of Baltimore, Chairman of the Section, spoke of the value of antisepsis in the operation for cataract, and alluded to two important articles on this subject which appeared in recent numbers of *Graefe's Archives of Ophthalmology*, the one by Professor Graefe, of Halle,

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and the other by Dr. Steffan, of Frankfort. Prof. Graefe, when using a solution of 1-5000 bichloride of mercury, gets the surprising result of only 10 failures in 1,074 cases operated upon. Steffan, in 426 cases operated upon, gets 28 cases of infection. In this series of cases, Steffan makes use of what he calls absolute cleanliness, and expresses his disbelief in the value of antisepsis. Dr. Randolph agrees with Graefe, and seems to think that the latter has the best of the argument, and stated that by far the majority of the ophthalmic surgeons, now-a-days, regard the omission of antisepsis in the operation for cataract as a positive step backward.

The speaker referred to an article by Schmidt-Rimpler, on myopia in schools, in which the latter demonstrated that myopia is, in a large number of cases, acquired in school-life; that in these cases, where myopia already exists in a mild degree, the condition is made worse by excessive study, and that the influence of suitable or unsuitable hygiene, as a causal agent in the production of myopia in schools, is undoubted, as is shown by the great school in Frankfort and in Pulda. In the former institution, where good hygiene prevails, myopia was found in 24 per cent. of the scholars, whereas, in the latter school, there were 32 per cent. myopic.

Reference was made to suturing of the cornea after cataract operations, a method strongly advocated by Mendoza, Abadie, and others.

The latest treatment of detachment of the retina by the injection of two or three drops of the tinct. iodine, was shown to be a justifiable method of procedure, though not devoid of danger, and the speaker mentioned a case where this treatment was adopted which had been followed by purulent choroiditis extending up to the meninges of the brain, and death.

Dr. Randolph emphasized the value of fluorescein—in a solution of 10 grains to the ounce—as a means of diagnosing lesions of the cornea, more particularly in those troubles where the anterior epithelium of the cornea was involved. He also mentioned some experiments of his own, and of Kolinski, on the production of cataract in rabbits by feeding them on naphthalin, and seemed to think that these investigations would probably prove a valuable contribution to the pathogenesis of cataract.

Dr. Alfred C. Palmer, of Norfolk, Va., introduced, in a short paper, a new form of treatment akin to massage, which he termed

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Palpo-Traction.

He claimed that many distortions of the lids might be improved, resulting in lasting benefits by this conservative plan. He claimed no good results unless used in infancy, when the tissues are pliable, and easily moulded by manipulation. He asked the obstetrician to pay strict attention to the formation of the lids of the new-born; and in all forms of entropion, ptosis, contracted palpebral fissures, etc.; to begin at once and shape the lids and retract them to their proper forms and positions. He also asked ophthalmologists to pay attention to the subject.

Dr. Wm. F. Mercer, of Richmond, Va., in reporting on the

Advances in Laryngology and Otology,

Called attention—

1st. To the conclusions of Lemon in his investigations in regard to the transformation of benign growths of the larynx in consequence of intra-laryngeal operations.

2nd. The early treatment of naso-pharyngeal and throat affections, in young growing children, as a cure or prevention of certain derangements of the nervous system and impairment of the intellectual power existing, or shown later in life.

3rd. Nasal intubation as an easy and ready mode of cure in hypertrophy of the soft intra-nasal tissues, deviations of the cartilaginous septum, fractures, etc.

4th. The easy and certain means of diagnosis of empyema of the antrum of Highmore by the illumination of the maxillary bones by an electric lamp introduced into the mouth and the importance of perfectly free drainage.

In the branch of *otology*, he calls special attention to the great importance of the early recognition of, and treatment for, acute suppurative otitis media following scarlatina, thereby greatly reducing the high percentage of deaf mutism from this cause.

Dr. Alexander Duane, of Norfolk, presented a paper on the

Modern Treatment of Strabismus.

In it he contrasted the idea formerly prevalent, that the squint operation is very easy of performance, and requires no special accuracy in the estimation of the amount of deviation present, with the modern view that the correction of strabismus should be preceded by the most careful and accurate tests, and that the operation should be a graduated one, controlled by the most precise examinations made be-

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fore and during its performance. Adopting Mauthner's division of squint into *spastic, accommodative, concomitant* and *paralytic*, he pointed out that the first two varieties were in the main to be corrected by fulfilling the causal indication; *i. e.*, spastic squint, being usually due to hysteria, meningitis, or some other disease of central origin, requires treatment directed to these affections; while accommodative squint and strabismus exanopsia demand relief of the ciliary spasm by means of atropinization and correction of the faulty vision. In concomitant squint, the apparently obvious indication of tenotomy, is by no means universally indicated, and he drew a strong line of distinction between cases with marked relaxation of the tendons, in which advancement (including sometimes, even advancement of the apparently contracted tendon) was required, and cases with too great tension of the tendons, in which tendency (including even, perhaps, tenotomy of both of two opposing tendons) was demanded. He cited a remarkable example of a case of squint, with tendon relaxation, in which a divergent squint was rendered less by *advancement of the external rectus*, and quite cured by advancement of all four of the lateral recti. In paralytic squint, after briefly adverting to the general inutility of constitutional treatment, he enunciated Alfred V. Graefe's rules for the operative treatment. These are, in brief, to do the compensating operation (tenotomy of the associated antagonist) wherever possible, *i. e.*, in paresis of the internal and external recti, and of the superior and inferior oblique; to do tenotomy of the direct antagonist only in paresis of the lateral recti, and then only as an adjuvant to the compensating operation; and to advance the paretic muscle in paresis of the superior and inferior recti, and also in paresis of the lateral recti when the preceding operations are insufficient. He cited two cases of paresis of the superior oblique seen by himself, one of which he had successfully treated by operation; and one case each of paresis of the superior and of the inferior rectus, likewise successfully treated according to V. Graefe's rules.

Dr. Charles M. Shields, of Richmond, Va., read a paper on—

When Shall we Operate for Cataract and Strabismus in Children?

The text-books ignore the question, and that as a large proportion of the cases of cataract in children were of the zonular variety, allowing some vision, the operation was

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generally put off until they were from ten to thirteen years old—an age at which the retina had often lost its functional activity from disuse. His last five cases were cited in support of the argument for early operation. Three of them were between the ages of ten and thirteen, and although the operation was successful in obtaining a clear pupil, the visual results were not very satisfactory.

The other two of the series were much younger—one three years old, the other six months. Both were needled, and gave the most satisfactory results. Dr. Shields thought the earlier the operation for cataract in children, the better the result for the following reasons: First. In the young the eye is more tolerant of surgical procedures. Second. The child is given all the benefit in gaining education that vision secures; and thirdly. The permanent visual results are better than would be obtained at a later age.

As to the age for operation in strabismus, he thought that usually suggested (six or seven years) early enough in alternating squint, as vision in either eye does not suffer from delay; but where the strabismus is confined to one eye, the monolateral form, the earlier the patient is operated on the better.

In the form of squint, vision is constantly suppressed in one eye, and amblyopia from disuse results, making the eye useless. The operation should be performed in the monolateral variety as early as it is recognized.

A paper was presented by Dr. John Herbert Claiborne, Jr., of New York, N. Y., on

Otitis Furunculosa (Boils in the Ear).

He summed up his conclusions in the following way:

1. Furunculosis of the outer ear is a local disease.

2. The cause is the transmission by rough means beneath the skin of pyogenic microbes.

3. The prognosis is good, both as to the life and hearing of the individual.

4. The treatment consists in local antisepsis, (solutions of boric acid, carbolic acid, etc.,) moist heat, and incision of the furuncles when they point.

Dr. Laurence Turnbull, of Philadelphia, Pa., who had been invited to attend the session, favored the Society with a paper on

Catarrhal Otitis Media, or, Aural Catarrh

Which treated mostly of the results of the disease. He says, in passing, that the most of so-called hearing restorers act most injuriously upon the sensitive ear, and are of no

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benefit except to those having a hole or perforation of the drum membrane, or to those who suffer relaxation of the small bones of the ear, which become sometimes separated from the membrana tympani. In many instances they have acted as a foreign body, and when they have a metal stem, as is often the case, they are sure to set up a "running ear." The only form of artificial covering to the diseased perforation of the drum membrane, should be a delicate gauze or rubber, charged with an antiseptic solution to protect the ear from the floating microbes in the air and from temperature changes. He then detailed at length a correspondence with a patient who had tried to use some of the artificial aids referred to. In addition to the measures recommended in his book for such a case, he advised massage to the ears, valerianate of strychnia for the nervous debility of the patient; and as to hygienic rules, he advised a life on an elevated region, dry house, woolen underwear, and the use of a small piece of wool in the ears when out driving, etc. Do not let water get into the ears

Dr. C. M. Blackford, of Lynchburg, Va., presented a paper describing

A New Method of Lifting the Epiglottis, devised by Dr. Samuel P. Preston, of Lynchburg, Va.

The instrument used consists of an ordinary laryngeal silver probe, with the last half inch bent so as to make a right angle with the remainder. Rings are soldered on the shaft of the probe, through which the third and fourth fingers of the left hand are passed. Introduce the probe, and let the bent portion press down on the glasso-epiglottidean ligaments. This pressure tightens the ligaments, and thus lifts the epiglottis. This instrument is used in the Throat Clinic in Vienna. By holding the laryngeal mirror with the thumb and fore-finger of the left hand, with this elevator between the third and fourth fingers of the same hand, the right hand is left free for use. The pressure of the probe is not great enough to cause retching, and does not cause special inconvenience to the patient.

Dr. L. H. Keller, of Luray, Va., read a most thoroughly prepared report on *New Remedies*, and some recent uses of a few of the old ones. His paper reviewed the most recent therapeutics of over forty-five articles. It will prove a most useful paper to the practitioner for reference when published in the *Transactions*. A synopsis of it can scarcely be made.

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THIRD DAY—*Thursday Morning, September 4th.*

After preliminary business, call was made for reports from the Section on Obstetrics and Diseases of Women and Children, when Dr. Grier M. Nickell, of Millboro Depot, Va., presented the report on *Diseases of Women*—limiting his paper mostly to a statement of Tait's technique as to abdominal section; to a description of Dudley's modification of Alexander's operation; of a new operation (Fowler's) for the cure of utarine myomata; and of Dr. Skutsch's new operation of "salpingastomy," which is intended to save the tubes in position. A small oval section is removed from the ovarian end of each tube, and the mucous and serous coats are united by fine silk sutures around the opening thus made.

Dr. Thomas M. Norton, of Washington, D. C., presented the report on *Diseases of Children*. His paper was taken up chiefly with the recent literature on "Club-Foot," and on the "Artificial Feeding of Infants." It also described the newly-defined disease known as "*Cœliac Disease in Children.*" It occurs in children between one and five years of age, and is characterized by large, white, frothy, and intensely fetid passages from the bowels. There is marked loss of muscular power. Cause unknown, as is also its pathology; and yet the majority of cases die after lingering for months. As to treatment, starchy food must be avoided. Malted foods are useful, but peptonized foods are useless. Cod liver oil and tincture of iron are the principal medicines required, with the addition of subnitrate of bismuth when the bowels are loose. The Report concludes with an approving reference to the primarily local origin of diphtheria.

In the Section on Practice, Invited Guest Dr. Landon Carter Gray, of New York city, read a paper on

Vertigo.

He said that an important generic distinction between vertigo of organic disease and that of a functional nature is that the former is attended by less irritability and apprehension on the part of the patient than the functional form. Kidney, heart, and organic liver troubles cause slight vertigo, lasting only a short time. In vertigo, due to kidney disease, the headache sometimes disposes to hebetude or coma—occasionally convulsions; there may be œdema also. In vertigo of organic liver disease, there is usually some degree of hebetude or jaundice or dropsy. Vertigo due to brain lesions will prove pathognomonic. Thus *cerebellar* vertigo

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causes "tibulation," or one-sided staggering gait, or sudden semi-circular whirling. According to Dana, temporal lobe lesions may produce like symptoms. Spinal lesions are not apt to cause more than slight vertigo; in locomotor ataxia, dizziness may occur when the patient's eyes are closed. Middle ear and labyrinthal diseases also cause vertigo.

But there is a chronic vertigo, varying from a sudden sensation of a loss of equilibrium to dread of going about, often attended by symptoms of other nervous disturbance, such as tingling of extremities, fulness about head, usually felt most at the vertex, with slight aural ringing, mild insomnia, irritability, etc. It is most common in young and middle-aged adults, and is most frequent, in Northern climates, in the first warm months of the year. In severe cases, even going from a cold into an over-warm room will induce an attack. Neurasthenia is common. Tongue is usually unaffected, but there is generally an excess of uric acid or oxalate of lime in the urine. Hence, Murchison gave to this symptom-group the name, lithæmia. But Dr. Gray said many cases do not present evidence of liver trouble; nor is there a standard by which to judge of an excess of uric acid in the system; and again cholagogues often aggravate the vertigo as well as nervous symptoms. He said that generally this peculiar form of vertigo is due to some chronic and persistent error of digestion—either of the nitrogenized or starchy elements of food or of both. Constipation, without coated tongue or foul breath, is common in this form of digestive disease. Predispositions to gout or rheumatism seem to cause such trouble; but the exciting causes of the vertigo are mental or physical over-strain, great anxiety, malaria, very sedentary life, etc.

Therapeutically, in those not having neurasthenia, he gives twenty drops of dilute nitro-muriatic acid, before meals, in a wine-glass of water, and also one drachm of fluid extract, or two grains of solid extract of cascara sagrada three times daily—reducing the dose if it causes more than two feculent stools a day. Interdict all red meat diet. In about ten days the patient will feel better generally, but the vertigo will still be unaltered. Then stop the acid, and instead, give the best pepsine and pancreatine—pepsine immediately after meals, and pancreatine an hour and a half later. After a time, gradually return to meat diet, but only once a day. In neurasthenic cases, in addition to this treatment, require the patient to take absolute rest—even sometimes in bed for two or three weeks. It is better to err on

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the side of enforcing too much than too little rest in these cases. In so radically differing from others with reference to the treatment of this chronic form of vertigo, he has only to say that his experience has taught him to so differ.

In discussing the paper, Dr. Wm. W. Parker said that Dr. Gray was undobtedly correct in attributing the cause of the common form of vertigo he had described to dyspepsia. He had cured a number of such cases by persistence in requiring that the patient adopt a very "rigid diet."

Dr. Hunter McGuire said that he had been greatly interested in the capital paper just read. He had given much study to these cases of chronic vertigo, for they were indeed chronic in his hands until he came to consider them as typical of a form of lithæmia originating in some derangement of the portal circulation—he scarcely knows what. But he had noticed that so long as the liver kept on acting well, the vertigo did not so much trouble his patients. The inaction, or perverted action, of the liver in these cases is not always manifested by the so-called characteristic bilious tongue, for that organ or member may be red and moist, while the alvine actions are grayish and putty-like. But he had noticed in these cases a tendency to belch some hours after eating, which he at once attributed to some form of gastric or intestinal fermentation. Acting upon this suggestion, he has derived benefit in some cases, and cured others, by keeping up a somewhat continuous use of cholagogues, so as to get one or two good feculent actions a day; and then, by the use of minute doses of bichloride of mercury, three times daily, just after each meal. After keeping up this treatment a short time, he then gives, after each meal, a perfectly neutral solution of the hypophosphites of lime and soda. The syrups of the hypophosphites, as found in the shops, are injured by the amount of sugar they contain, and experience has taught him that the fresh solutions without sugar are superior to any of the best of the manufactured syrups, as found on sale in the stores.

Dr. Isaiah H. White had seen several cases of the form of vertigo so accurately described by Dr. Gray, and which Dr. Da Costa had called lithæmia. It was by no means certain that these toxic symptoms were produced by uric acid. It was equally as probable that they were produced by some form of the ptomaines generated in the alimentary canal, or some kindred product formed in the metamorphosis of tissue. Nature, never prodigal, having supplied one organ with the element necessary for its growth or functional ac-

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tivity, has provided that before this material shall be thrown off as excrementitious, it shall again be taken up and re-elaborated by the lymphatics, for use by some other organ. In this stage of waste, or partial death of tissue, are formed the leucomaines, some of which are poisonous. It has been claimed by some that gout and rheumatism are produced by these toxic agents. But whatever the agent may be, the symptom of vertigo is produced by a vaso-motor disturbance of the circulation of the labyrinth of the ear.

Mr. Hugh Blair, of Richmond, Fraternal Delegate from the Virginia Pharmaceutical Association (and who does most of the urinalytic work for the profession of Virginia and adjoining States), has long since come to the conclusion that this form of vertigo is due to lithæmia. Evidences of impaired portal circulation and function are always found while making urinalyses in such cases. Murchison was undoubtedly correct in his views with reference to these cases. Lithæmia should be taken as but another expression for gouty diathesis, and it is due to a disordered or fermentative indigestion. He referred to numerous instances in which he had been urinologically consulted about such cases, which were cured as soon as the doctor put the patients on the line of treatment that had been so favorably spoken of during this discussion.

Dr. Wm. W. Parker, of Richmond, Va., read the following as the deductions of a paper he submitted on

Homœopathy.

1st. That homœopathy lays its foundation upon doubtful facts, and completes its superstructure upon the wildest and most extravagant generalizations.

2nd. That true medicine is now a grand structure with its graceful domes and arches and multiform compartments; while homœopathy is a small closet therein, opened by a very small key.

3rd. Medicine has always recognized the value of rational empiricism or experimentation, while Hahnemann ignores the rational for the irrational.

4th. True medicine says to the sick man, "What is the matter with you?" Hahnemann says, "I don't know, and shall not inquire into the nature of the disease, but I will try and cure you."

5th. Medicine from the very beginning is common sense and practical. Homœopathy is transcendental, and utterly incapable of proof.

6th. Medicine is physics. Homœopathy is metaphysics.

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7th. That in the treatment of grave and highly acute inflammatory diseases homœopathy is criminal. It throws a straw instead of a plank to a drowning man.

8th. In ignoring the observations of the wisest men of twenty-five centuries, Hahnemann's rashness is only excelled by his conceit.

9th. That ignoring pathology, the cause and nature of disease, Hahnemann goes blindfolded into the temple of medicine.

10th. That in turning his back on surgery, he disowns the bravest and most brilliant son of medical science.

11th. The tables above referred to prove what medicine has always asserted, that the "infinitesimal dose" is nil—having no power either to kill or cure the patient.

12th. That the glory of homœopathy has departed, and the "day of doom" has come. And finally,

13th. Having deserted Hahnemann, their leader, fairness demands that they sail no longer under false colors.

Dr. Wm. T. Walker, of Lynchburg, Va., upon request of the President, described a *new invalid bed* which he had invented, and of which he had a model on exhibition. He spoke of its various adaptations for the sick and for surgical operations, etc., and spoke of the encouragement he had received from distinguished practitioners with reference to its utility.

Dr. Hunter McGuire spoke most favorably of it in hospital as well as in private practice.

Dr. A. Z. Koiner, of Roanoke, Va., moved that a committee of two or three Fellows be appointed to memorialize the Legislature of Virginia to enact suitable laws to regulate the transportation of dead bodies over railroads, etc. Carried. Drs. Koiner and M. W. O'Brien, of Alexandria, Va., were appointed.

The Diagnosis of Pelvic Disease, or When to Operate?

Dr. I. S. Stone, of Lincoln, Va., read a brief paper, in which he endeavored to show the chief points of diagnosis in the pelvic diseases of women, laying especial stress upon the indications for operative treatment. He claims the profession practically a unit upon the surgical treatment of pelvic and abdominal tumors, as well as extra-uterine pregnancy and pyosalpinx when recognized. The treatment of these conditions by electricity, is not only barren of good results, but is hazardous in itself, and leaves the case still more difficult to deal with when operation is resorted to. The author regards salpingitis in rural districts as quite a common occur-

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rence following puerperal cases, its symptoms so closely resembling pelvic peritonitis and cellulitis, as to render diagnosis impossible. This salpingitis is the same as that seen in the cities, with the difference that gonorrhœa being rare in the country, infection rarely occurs; consequently pyosalpinx is not so frequently seen. These cases of salpingitis frequently recover without leaving a trace of disease to be ascertained by vaginal examination. After urging positive views upon the treatment of these cases of pelvic disease, the writer thought it of far greater importance to decide not to delay operation, than to try and name the disease after it was plainly one resisting ordinary treatment and necessitating exploratory section. The extent of the disease, the complications arising during operation, which are impossible of definition before, are the real dangers of the operation, and are often the positive obstacles to their successful treatment by any other than heroic measures. Tubercular salpingitis also received attention, and the point was well taken, that many cases of mysterious pelvic disease in young women are to be explained by properly investigating their cause. It was suggested that these cases are frequently aggravated after marriage, and that when no possible blame could be attached to the husband.

In response to invitation to open the discussion, Honorary Fellow, Dr. George Tucker Harrison, of New York city, said that Dr. Stone had left but two points which he thought proper subjects of criticism. Dr. Stone seemed to look upon puerperal malarial fever as a disease of very minor importance. Dr. Fordyce Barker, some years ago, drew prominent attention to this subject. It is not a rare disease in some localities. For instance, it is quite a common complication or sequel of labor in New York city. But it is not always easy to trace the development of the disease to the proper cause. It undoubtedly belongs to the puerperium. In a case recently under his care, delivery was conducted under the most perfect aseptic principles; and yet, about a week after labor, puerperal malarial fever set in, and lasted seven weeks. Incidentally, he remarked, that rheumatism is a frequent sequel of puerperal malarial fever. As to removal of the uterine appendages, etc., lately the operation has become much abused. Novices, as well as specialists of high and low degree, are performing laparotomies with a recklessness that calls upon the profession to demand a halt. He cited an instance under his advice where laparotomy was advised by a specialist under the erroneous diag-

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nosis of pelvic structural disease instead of normal pregnancy, as the case proved to be. Of course, laparotomies are demanded in certain selected cases, but he condemns the popular wholesale removal of ovaries, etc., and thinks their causeless removal should be rebuked as severely as was Baker Brown, for his wholesale removal of clitorides years ago.

It should not be forgotten that mental derangement even, has followed the removal of the sexual organs of the female. It is a difficult matter to decide in most cases when to operate, and no one should undertake so radical an operation until after the exhaustion of every possible means of relief —unless, of course, the diagnosis of incurable structural disease of the ovaries or appendages is apparent. Extra-uterine pregnancy is about the most important subject that can claim the attention of the obstetrician, as well as laparotomist. The condition is too often not recognized until too late to render service by surgical means. The diagnosis should be made early, in order that the operation may save life. Tait is all wrong as to his pathology of extra-uterine pregnancy. He confounds hæmatocele and hæmatoma with extra-uterine pregnancy. Hæmatocele is an effusion of blood into the peritoneal cavity, about Douglas' cul-de-sac. Hæmatoma is an escape of blood into the folds of the broad ligament alone. But, in extra-uterine pregnancy of the tubal variety, after the probable cessation of one or more menstrual periods, there is often an irregular hæmorrhagic discharge per vaginam, which very generally precedes rupture of the tube by several days.

Invited Guest, Dr. Joseph Price, of Philadelphia, Pa., wished to emphasize all that Dr. Harrison had said as to reckless operations. Laparotomies have been too much overdone by those who had not a sufficient purpose in view. They should be undertaken only for an objective disease—not for a subjective one. More of this kind of work has been done in New York than anywhere else on this continent, and there the operation has undoubtedly been abused. Furthermore, many operations have been undertaken without having been at all well done; and such imperfect operations have brought discredit upon pelvic surgery. The time has come when simply opening the abdomen should not cause death. This is proven by the results of Dr. McGuire's operation of supra-pubic cystotomy. Even the mortality resulting from laparotomies for the removal of ova-

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rian, tubal, or uterine diseases, has now become reduced to about two per cent.

Dr. Price then exhibited some drawings of pus tubes by Dr. Coe only to condemn them; they are very unfortunate and misleading. If pus can be diagnosed in the female pelvic cavity anywhere, cut for it as you would do for a pus-cell anywhere else in the body. Extirpation of the ovaries, etc., should have no less an object in view than to save life. The day of so-called "normal ovariotomy" is past. But he would advise that all forms and sizes of fibroids be extirpated as soon as recognized. Dr. Price also insisted upon the exercise of the greatest degree of caution as to intra-uterine examinations and medications. Dr. Emmet says he has not passed a uterine sound for years. He has been called upon a hundred times to do abdominal sections to cure the results of electrical uterine applications; and the same may be said of the results of forcible, rapid dilatations of the uterine neck, and other intra-uterine procedures. Of course there are some diseases that require intra-uterine medications, but be very cautious in resorting to such methods of treatment. But he never dilates a cervix, nor would he pass a uterine sound—he is afraid to do so. More attention should also be given to the occurrence of gonorrhœa in wives who are innocent of the thought of a wrong on the part of their husbands. The ravages of this disease among women are twice as great as those of small-pox. As to extra-uterine pregnancy, Virginia has a right to be proud of her gifts to the army of obstetrical surgeons. Bingham, of this State, about a hundred years ago, did the first scientific operation for extra uterine pregnancy, and about nine years later, he did the second also. Dr. Price then exhibited a number of drawings illustrating cases of ovarian and tubal pregnancies for which he had operated. In his exceptionally large experience in this kind of work, he has found rupture of the tube to occur almost invariably near one of the fimbriated extremities. As to ovaries with simple abscesses in them, he has removed more than he has found collected in all of the books on the subject that have been at his command.

Honorary Fellow, Dr. Hunter McGuire, of Richmond, Va., in responding to call on him, remarked that Dr. Harrison had said that Dr. Fordyce Barker was the first to call attention to, and name puerperal malarial fever. But it was the late Dr. Otis F. Manson, of Richmond, who first described and designated the condition, and now Dr. Barker

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recognizes this claim of priority. Dr. Price had said that the man who employed a sound or made intra-uterine medications, ought to have his head shaved. If Dr. McGuire had a strand of hair removed for every one he had made, he would be bald-headed. Dr. Battey is a good man and a great surgeon, and was the pioneer in important gynæcological work; for this he deserves all praise, but "Battey's operation" for normal ovariotomy would become obsolete. In Dr. McGuire's opinion, it was a crime to take out normal ovaries for any nervous or hysterical condition. Some years ago, he had done it, but he regretted it; it did no permanent good. When there was some pathological change in the ovaries or tubes, then, after failures by other means, the operation should be done, but all other means should be first exhausted. He, himself, had gotten much good in such cases from the use of galvanism. He did not agree with Dr. Price that all fibroids should be removed. In nine out of ten cases that come to him, he advised the patient to let the tumor alone. If the growth is stationary, or nearly so, giving rise to no pain nor mechanical obstruction, he would let it alone. If the gentleman knew how common fibroids were among negroes, and how many negro women were working to-day with fibroids of the uterus, in no way disabled for work by the tumors, he would not advise operation in all cases.

Invited Guest, Dr. Joseph Hoffman, of Philadelphia, Pa., said that until Emmet arose only a few years ago and protested against the hasty sewing-up of perineums and uterine cervices, etc., these operations were greatly abused. Battey's operation has proved a failure, and will be done away with. Others think that all forms of women's diseases are essentially cellulitis, but in ninety-nine cases out of one hundred, this is a mistake. Tait has done nothing more than revive the pathology of forty years ago, and he evidently got it from Nonat, who fully discussed the subject as a peri-uterine and lateral phlegmon, about 1846. Surgery ought to be resorted to only for the purpose of relieving pain or saving life. To puncture a pus-tube with the hope of curing it, is idle, because tubal pus cavities are like the links of sausage. Hæmatocele is very rare; but Mr. Tait says, when it does occur, it is often mistaken for extra-uterine pregnancy. Exploratory incisions should be used only as guides for the surgeon to see whether or not he can cure a given case. Never cut down on an abdominal abscess or tumor, and half finish the operation. Such half-

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finished operations injure surgery in professional esteem. Curetting the endometrium is bad practice. Under modern modes of procedure, laparotomies are comparatively devoid of danger. Exercise common sense in the selection of cases for operation. Don't think that because the operation is abused by some, it is totally unjustifiable in certain cases.

Invited Guest Dr. Edwin Ricketts, of Cincinnati, O., confined his remarks to a review of the history of ovariotomy and abdominal sections generally—suggested by the fact that the Society is now meeting within a few miles of the birthplace of the immortalized McDowell, in this (Rockbridge) county, Va. Bringing his subject down to the present time, he thought that now the operations of opening the female pelvic abdomen were too hastily undertaken by surgeons, who seek rather to make reputations for daring than to save the lives of their patients. Discredit comes upon surgery whenever an operation is undertaken without a previous diagnosis and a consideration of the points which determine prognosis. He hoped the profession would frown down such reckless surgery, and keep it always lifted upon the platform of humanity—such as prompted McDowell to undertake the first ovariotomy, and such as will ever make the profession commend it to their patients.

Dr. Isaiah H. White, of Richmond, Va., regretted that he had not heard all of the admirable paper of Dr. Stone. He had only caught his concluding remarks on the early treatment and diagnosis of extra-uterine pregnancy. If these cases could, with certainty, be diagnosed early, many lives would be saved. Frequently, the first intimation of such a condition comes like a clap of thunder from a clear sky, when the patient is found in collapse from hæmorrhage due to rupture of the sac. But there are cases in which we may not be in such haste to operate, where we want to stop the growth of the fœtus and hold ourselves in readiness to perform abdominal section upon the appearance of the first untoward symptoms. In such cases the life of the fœtus may be destroyed by elcctricity, become encapsulated, and remain an innocuous mass for years. He referred to a case that had come under his observation, where an ectopic eight months' fœtus had remained ten years, causing no trouble except when the mother became again normally pregnant, and the bulk of the combined tumors caused so much distress that premature labor had resulted. He thought Dr. Hoffman did not attach sufficient importance to peri-uterine inflammations, especially as an etiological factor in the production

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of pyosalpinx. In the illustrations of this disease presented by Dr. Price, and which looked like link sausage, the strictured portions were produced by constricting bands, the result of inflammation in the peritoneal covering; the lumen of the tube being obliterated, and the secretions retained, pus was the result.

He was glad to hear Dr. McGuire renounce his faith in Battey's operation except for ascertained organic disease of the ovaries, and hoped that he would soon become a convert to greater conservatism in intra-uterine medication, as he was himself convinced that too many women were made wretched and miserable for life by inflammations in the neighborhood of the uterus, produced by injudicious local treatment.

Invited Guest Dr. Landon Carter Gray, of New York city, in responding to calls for remarks, said that the further resort to Battey's operation, and the like, for the cure of nervous diseases, would be a crime. Years ago, Baker Brown was properly expelled from the profession because of his useless clitoridectomies. The great name of Dr. Sayre, a short while ago, gave authority for unnecessary circumcisions for the relief of some nervous troubles. Steven's wholesale cutting of eye-muscles for the treatment of chorea, and other nervous diseases, should likewise be condemned. None of such operations can ever claim to be panaceas, and they should not be undertaken except when there is a clearly defined requirement for them, other than the simple nervous trouble. In almost all the cases where such mutilations have even apparently done good, such relief was of only temporary duration, showing that the supposed cure was, in reality, the result of a psychological action. Normal ovariotomies have unquestionably appeared to do good, in a small proportion of instances, upon this very principle; but in all the cases so operated on that have come under Dr. Gray's observation, the attacks have returned with even greater severity than the original sickness. As long ago as 1828, this principle of mental impression was put to a thorough therapeutic test by Esquirol, and the results of his experiments should be kept ever before those of the profession who still insist upon experimental operations. He divided his cases of epilepsy, etc., into groups. To one group he gave one class of remedies, with the addition of strong mental encouragement. To another group he gave another class of medicines, with the same encouragement as to the benefit to come from the "new treatment." To another group he gave an-

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other class of remedies, etc.; while to still another group, he gave simply colored water, etc. Each group of cases did equally well for a season, but relapses soon began to occur, and all the patients fell back to the former degrees of sickness. Up to the present time, no remedy has stood the test of prolonged experience, in epileptic forms of diseases, unless it be the bromides. Undoubtedly, operations have been most beneficial when performed upon the strongly impressionable class of patients; but this very fact confirms the suggestion that most probably one operation would do about as well as another. If this be so, then, in the name of humanity, whatever may be the amount of impression that you wish to leave upon your patient, perform that operation which is least serious in its possible results of unsexing the individual, or otherwise mutilating her. To make a simple incision somewhere, and yet let the patient believe that a severe operation has been performed, will do as much good, in most cases, as the real operation.

Dr. Wm. W. Parker, of Richmond, Va., could not understand why all this hue and cry had been raised of late years about the danger of ordinary uterine treatment unless it was another case of the cry of authority against every-day experience. Of course judgment and gentleness are essential in such treatment, as anywhere else. He believes intra-uterine injections are perfectly safe if the usually recommended precautions are faithfully observed. In a large practice daily since the war, he has used them without ever hearing of harm resulting.

Dr. Harrison, as a personal explanation, said that he was not so wholly opposed to Battey's operation as his remarks might have led some to believe. He had seen some serious cases of nervous troubles permanently relieved, if not cured, where the ovaries were only moderately diseased, so far as could be detected after their removal. But Dr. Battey's original error consisted in naming his operation "normal ovariotomy." He thinks Dr. Battey justly entitled to the thanks of woman, and to the praise of the profession, for having pointed out an overlooked field for future and thorough gynecological study.

Dr. Stone, in closing the discussion, thought it proper to remark that Dr. Barker's puerperal malarial fever is often nothing but the evidence of the existence of pus in the Fallopian tubes. He would not, however, undertake to deny that there is a pure puerperal malarial fever, as Dr. Manson had described prior to Dr. Barker's mention of the subject.

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As to Battey's operation, he never did but one, and the result was unsatisfactory. Hence, he stood simply as an interested listener to the remarks that have been made to-day by gynecic surgeons and practitioners of such large experience and extensive reputation, whose dicta will go far to shaping or establishing subsequent professional opinion on the subject.

Papers by Drs. Wm. H. Bramblett, of Pulaski City; Wm. R. Cushing, of Dublin, and P. B. Green, of Wytheville, were submitted by title.

Dr. Isaiah H. White reported a case of *nephrectomy for pyonephrosis*, and exhibited, as a pathological specimen, the kidney removed, showing complete destruction of the secreting portion of the organ—only the cortical portion remaining. He also exhibited the other kidney, removed *post-mortem*, which was filled with calculi.

During the Afternoon, Dr. Hunter McGuire was called to the chair in the temporary absence of the President, Dr. Parker, who was installed during the Morning Session.

Permanent Drainage of the Male Bladder by a Retained Canula Above the Pubes

Was the title of a paper read by Dr. Geo. Ben. Johnston, of Richmond, Va. He said that Dr. Van Buren had devised the best instrument for the purpose that he knew of, consisting of an outer canula, an inner tube, and a trocar. After quoting descriptions of these, Dr. Johnston stated that he had added to the instrument a steel guide, double the the length of the trocar, over which the outer canula may be easily drawn out of the bladder and replaced without fear of losing its course. After describing the simple operation of entering the bladder above the pubes, and how to retain the instruments, he remarked that both acute and chronic cases are benefited by the proposed treatment. Conditions so benefited are urinary retention, injuries of the urethra or prostate, acute prostatitis, perineal abscess, urinary extravasation, coagulæ in the bladder, chronic cystitis, enlarged prostate, or cancer of this gland, or of the bladder, urinary fistulæ, sacculations, adynamia, etc. After pointing out nine distinct advantages of the operation, he gives a paragraph of cautions to be observed in performing the operations, etc.

Invited Guest Dr. Joseph Price, of Philadelphia, Pa., read a paper on

The Present Status of Abdominal Surgery.

The abdominal surgeon should be prepared for the un-

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expected—for packing the whole pelvis, or for removing a kidney or the uterus. Hence he should be a specialist.

Vaginal puncture is a dangerous procedure, because it cannot be predicted what organs are involved in the abscess wall, or the abscess may be multiple, etc.

Nearly every pelvic abscess takes its origin from a diseased tube or ovary. Hence the abdominal incision is best. To remove fibrocysts of the uterus, if carefully performed, shuts off the peritoneal cavity from the surrounding tissues —a technique which must be freed from every loophole of error. The great essential in the instrumental technique of the operation is the use of the clamp or serre-noeud. To the clamp belongs the credit of giving hysterectomy its acknowledged position. By its use, he has performed 27 hysterectomies without a death. Each stump must be made according to the exigencies of the case. In general, free the bladder, save the peritoneum, dissect out the tumor until sufficiently free to engage it with a clamp. As to the after-technique, close the pelvic peritoneum, and embrace the stump by the parietal peritoneum, so as to close off the peritoneal cavity absolutely. The mortalities of dabblers in abdominal surgery should not be considered. The Porro operation is preferable to the Cæsarian. As to ectopic pregnancy, operate as soon as the condition is discovered. He has had now an operative experience of 38 cases, but has never seen an intra-ligamentous variety of the condition.

Always remove the placenta when possible. If compelled to leave it, empty it of blood, make it as dry as possible, tie the cord close, and tie the stump. The peritoneum will probably digest it. In all cases of prolonged operation, especially in threatened shock, and after hæmorrhage, and in the presence of pus and debris, the value of flushing out the cavity with moderately hot water is beyond question. In those cases characterized by overwhelming quantities of pus, there is no need whatever of using antiseptics. Pure or distilled water thoroughly cleanses the abdomen, lowers temperature, slows the pulse, etc. In all abdominal surgery, germicides are useless, and may be harmful; the same may be said of opium, except where the opium habit has already been acquired. In after-treatment, allow no food or drink until the stomach is entirely settled. Then begin liquid diet in small quantities—buttermilk being an excellent initiative. If there are signs of tympany, a saline purgative will usually afford prompt relief; or, if this is not well borne, use small doses of calomel. As a preparatory

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treatment for operation, insist on rest in bed for at least twenty-four hours, and free purgation. Keep patient in bed at least three weeks after a laparotomy, which will obviate hernia in most cases. He has not much faith in the so-called electrical treatment of abdominal tumors.

Honorary Fellow, Dr. Hunter McGuire, of Richmond, Va., read a short paper on "*Some Nervous Troubles following Organic Urethral Stricture*," (which we publish in full in this number as Article II).

In response to questions by Dr. E. T. Brady, of Marion, Va., he said that he thought the aphasic condition in the case referred to was due to the stricture. To question by Dr. I. H. White, he said that syphilis was not present in the case.

Dr. Landon Carter Gray said that the paper of Dr. McGuire's brought to professional attention, for the first time, a new set of symptoms following urethral stricture.

Dr. Joseph Price stated that Dr. McGuire's cases recalled to his recollection two brothers who had stricture. One was found dead in bed one morning, and the other died in a water-closet—both apparently from brain lesion.

Dr. Geo. Ben. Johnston reported two cases of stricture followed by death—one from paralysis, and one from apoplexy.

Dr. Henkel, of New Market, Va., stated that he had seen several cases like those reported by Dr. McGuire; but Dr. Henkel had also had a female with a distinct set of nervous symptoms following gonorrhœa.

Dr. I. H. White said that he had asked whether any of Dr. McGuire's cases had syphilis, because many cases of apparent gonorrhœa are, in reality, only instances of concealed chancre within the urethra. In all cases of stricture, followed by nervous symptoms, such as Dr. McGuire had described, care should be taken to eliminate from diagnosis every trace of syphilis, since we know that this latter disease may be accountable for precisely the train of nervous symptoms described.

The Salient Points in Appendicitis. Its Diagnosis and Treatment

Was the subject of a paper read by Invited Guest, Dr. Joseph Hoffman, of Philadelphia, Pa. The cæcum hangs more or less free in the abdomen, and hence has considerable latitude as to motion; while the appendix varies in position according to the movement of the cæcum. There is frequently a dependent pouch between the mesentery of the

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appendix and the ileum, consisting of folds of peritoneum, which, from pressure of the rotation of the cæcum, becomes congested or atrophied, and is thrown into a band, in either way becoming a source of danger to near lying intestines, either as a strangulating cord, or as a ring through which a fold of intestine may fall, and be choked in the hernial fashion. Thus, it is evident that a purely physiological rotation of the cæcum may bring on a pathological congestion, without the presence of any irritating matter whatever. But keep in mind that, although the position of the appendix is variable, it is not abnormal, but depends entirely upon the rotary movements above referred to of the cæcum. This fact will be useful in determining approximately the position of the appendix, and thus shorten the operation, and prevent unnecessary handling of the intestines. As to treatment, surgeons are divided into three classes:—(1) those who operate at once upon the occurrence of induration, pain and high temperature; (2) those who wait, on the ground that a great majority recover under rest and opium; and (3) those who operate between attacks, or who wait for recurrence. This last class represents the progressive surgery of to-day, and includes such surgeons as Senn and Treves. But of course individual surroundings must have their due weight in determining when to operate. As to the plan of operation, be led by the principles of abdominal, not general surgery. Mr. Treves, Dr. Homans, etc., are wrong in condemning the drainage tube, as the results of Tait and hundreds of other abdominal surgeons prove. In women in general terms, the best advice is to cut through the median line; for the chances are that in women, the disease will not be found to be appendicitis; although, if needed, this incision has advantages anyhow. As to diagnosis, exploratory incisions are resorted to, often when symptoms point to the presence of pus; but Dr. Hoffman thinks they should be condemmed. In men, the presence of an indurated mass in the right iliac fossa, with detection of pain and fullness in the region by rectal examination is important. The right leg is often drawn up.

Dr. I. S. Stone stated that he had used salines as a derivitive, to avoid the onset of an inflammation. He no longer uses opium "to splint the bowels," in cases of peritoneal injury by surgery or otherwise.

Dr. Hunter McGuire advised, that if you have to operate in cases of appendicitis, do it early, while the patient's strength is good. First purge the patient with a saline, and then cut down without delay.

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Dr. Joseph Price said that he had frequently found the appendix floating around in a puddle of pus.

Invited Guest, Dr. Edwin Ricketts, of Cincinnati, read a paper on

Early Exploratory Incision as an Aid to the Diagnosis of Some Surgical Diseases of the Abdominal Cavity.

He has found it difficult, in many cases, to make a diagnosis previous to exploratory incision. To open the abdomen was easy enough, but afterwards to do *always* the best thing and that *promptly*, knowing when to end at exploration, bearing in mind that half completed surgical procedures are *rarely ever excusable*—these are of greatest consideration. He did not deny that a diagnosis could be made previous to an incision in some cases, but in a majority we cannot make out, with any degree of certainty, until "Thomas like" we first *see* and *feel* the condition present. He claimed that the one from the outside that is always sure of what is on the inside, is the one with his *occasional* operations is placed in a humilliating attitude before his guests, and is liable to attempt the completion of an operation that may be *wholly unwarrantable*. The undue conservative physician, with his free use of opiates, has grave responsibilities, for the reason that his prompt efforts for relief of pain too often postpones the recognition of needed surgical interference. He reported briefly, eleven cases, coming under his observation, where exploratory incision was necessary to diagnosis.

Dr. E. M. Magruder, of Charlottesville, Va., reported a case of

Removal of a Large Vesical Calculus per Vaginam

The stone was about two by three inches, and had caused a fistulous opening of about five-eighths inch diameter in the vaginal wall. The doctor reported the steps of the operation adopted for its removal, by enlarging the vesico-vaginal opening, and as the stone seemed adherent, pieces of it had to be removed at a time, instead of by lifting it out of its pouch.

Dr. M. D. Hoge, Jr., of Richmond, Va., presented the *Report on Neurology and Psychology* confining his remarks to

Epilepsy.

Keen, in speaking of traumatic epilepsy, declares that it is always a doubtful surgical procedure to operate upon the brain in the so-called "latent zone," that is, an area of brain tissue, the functions of which have not as yet been ascer-

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tained, unless the evidence of depression be very clear and distinct. There are certain known centres, such, for example, as that of sight, to which obviously the same reasons apply. In non-traumatic cases it is best not to trephine, for there is great doubt as to what part of the brain the exact seat of the lesion is located. One exception, however, is made to this, in what are called "focal" epilepsies, in which the spasms always begin in one part of the body. Removal of the centre supplying these muscles may be proved to be the proper course.

Wilson states that reflex epilepsy from traumatic injuries to the brain is not a rare trouble, and most every surgeon meets with one or more cases. It is, in the main, one of the most curable forms. In long standing cases, improvement in the convulsions does not usually begin at once after the operation, sometimes several months must elapse before the *habit* is broken up. As the origin of the disease is taken to be in the cortex of the cerebrum, from a surgical standpoint it is not difficult to understand that any chronic endo-cranial lesion which affects this part of the brain can produce epilepsy.

Sequin, in 1882, found that in some patients where bromism had been produced, or where the dosage, in order to be effective, had to be so large as to cause symptoms directly injurious to health, a combination of chloral with the bromides was fully as efficacious. It is not in any sense a "cure" for epilepsy, but it is just as good an anti-spasmodic as the bromides, and certainly effects the cardiac nerves and the cortex of the brain less unfavorably.

As is known, some chronic nervous disorders get well after an attack of infectious fevers; it is also a noteworthy fact that epilepsy sometimes follows such diseases as scarlet fever. Erlenmeyer puts on record a case in which a patient after recovering from a severe attack of la grippe, has become a confirmed epileptic.

We are perhaps more indebted to Hughlings Jackson for a clear elucidation and explanation of convulsions, than any other medical writer of recent date. In his monograph on "Convulsive Seizures," he has certainly given a new direction of thought to this subject of present investigation. Three classes of convulsions are made corresponding with to the three levels of the nervous system. The first level, speaking roughly, consists of the cord, medullar and pons, and represents the simplest movements of all parts of the body. The second level is composed of the centres of

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the Rolandic region, and represents the complex movements of the body, from the eyes to the perineum. The third level is composed of the pre-frontal lobes, and represents the most complex movements of the body. Genuine epilepsy belongs to the third, or highest level, and is produced by excessive discharges beginning in parts of the pre-frontal lobes of the cerebral system. An epileptiform seizure is always symptomic of a discharging lesion, and is due to the high instability of certain cortical cells, produced by a pathological process. This process consists of the nutrient fluid bathing the cells becoming comparatively stagnant, and in consequence, there is inferior nutrition; there is a "substitution nutrition," whereby the phosphorous compounds become more nitrogenous, or *vice versa*. This abnormal nutrition leading to a change of composition, is a pathological form, while the high explosion it produces, is a functional change.

The important question now arises, What is the best form of food for the nerve cells, one that will furnish them equally, and at all times, with the proper amount of pabulum? The answer is: fats and the phosphates. Sequin states that the central nervous system and peripheral nerves are largely made up of fatty substances. Albuminoids predominate in the gray matter, while fats are much more abundant in the medullary. In the ash of the cerebral substance, the phosphates exist to the extent of 93½ per cent. These facts must constantly be borne in mind in prescribing a diet for all nervous disorders.

As a proof of what little real therapeutic advance has been made in the treatment of epilepsy, we have only to examine the long list of remedies, from atropine to zinc; each drug having its advocates with reports of a more or less number of cures. That some of us have seen convulsions cease after the use of drugs, no one doubts, but how to explain, it is a matter of doubt.

Dr. J. D. Eggleston, an active and honored Fellow of this Society, is the only physician who has come nearest, as far as I know, to theoretically and practically solving the question of a cure for epilepsy, and I am largely indebted to him for the following method, which I have practiced since April, 1890. In all cases the convulsions are becoming less severe, and the intervals between the attacks longer.

The treatment is a combined one; partly direct and partly symptomatic. For the sake of convenience, he divided epilepsy into two classes: 1st. The traumatic, in which

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the indications are of a surgical nature; and 2nd. Into non-traumatic, which will now be discussed.

As has been stated above, a convulsive seizure is due to a nervous discharge originating in the brain cells, caused by defective nutrition. Now, as the cerebral substance itself is composed largely of the phosphates and fats, the very first step is to supply these in sufficient quantities to be at once appropriated to making up the waste. This can best be accomplished by the administration of cod liver oil, combined with the phosphates of lime and soda, either in the form of an emulsion, which is the most palatable and easily digested, or the pure oil itself. The food should contain a great deal of fat meat and butter.

Every source of external irritation must be carefully looked into and corrected. The cause may lie in insufficiency of the ocular muscles, polypi of the nose, digestive derangements of the intestinal tract, hæmorrhoids, phymosis or malpositions of the uterus. Whatever it be, remove this source of constant irritation which is continually sending nervous impressions to an anæmic brain, and there accumulating until it becomes surcharged, its equilibrium is disturbed and a nervous explosion—an epileptic fit—takes place.

In regard to the treatment of epilepsy by belladonna (or atropine). Trousseau refers to its having been used by Groding, Lauret, and Ricord, whose cases were published as early as 1838. To it no specific power can be ascribed. The chief benefit to be derived from its use is the paralysing effect it has on the whole muscular system. The spasmodic contraction of the throat, and the violent movements of the body during a convulsion, are, in a great measure, controlled by its use. Another important effect produced by atropine is, that after it has been given for a little while, the time between the first premonition or aura and the convulsion itself, varies from two to thirty seconds, giving the patient time to lie down or take some sedative. This, in itself, is an important gain, as will presently be shown. Dr. Hoge generally uses a solution of atropine (four grains to the ounce) hypodermically. Beginning with two drops, representing $\frac{1}{60}$th of a grain of atropine, the dose is increased slowly every other night by one drop, until there is a toxic effect produced. This is done to ascertain the maximum dose; when found it is decreased by one drop at each injection until the patient ceases to complain of insomnia, a burning dry throat, and twitching of the extremities. The

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time selected for administering the injection is after the patient has made every preparation for sleep and is in bed. The stage of mild excitement comes on in a few minutes, and unless sleep is secured, it may be several hours before the effect has subsided.

Hypodermic medication is the surest way of obtaining and accurate and full dose, which for an adult ranges from one-eighth to one-tenth of a grain. In children it is necessary to resort to medication by the mouth, usually one-fortieth of a grain is a full dose. If an accurate date of the time of the convulsions is preserved, it will be observed that there is most always a certain periodicity of occurrence, either every third, ninth, fifteenth, eighteenth or twenty-first day; as soon as the "fit day" is established, then always give the atropine the night before in addition to the regular time.

The use of bromides can not be dispensed with entirely, especially during the first few months of treatment. The patient is advised to have always ready a bromide solution, for instant use, put under the pillow at night or carried in a convenient pocket during the day. Dr. H. orders a teaspoonful of Peacock's Bromides, with the addition of five grains of chloral hydrate to the drachm, or the same quantity of bromidia to be taken with an equal quantity of water at one dose. It should be immediately swallowed whenever the aura is felt, a slight fainting sensation, or any vague sense of an impending attack. As stated in speaking of atropine, the interval after the aura is usually long enough to ward off an attack, if the bromide is taken during this golden opportunity. He has several times seen the convulsion suppressed, even after the teeth have begun to clinch. By this means, the habit is broken up, which signifies that the free intervals are gradually lengthened.

A well regulated hygienic life, with the avoidance of all exciting contests, is of course urged.

In conclusion, he would repeat again, the treatment which gives the best results in epilepsy is a combined one, nutritive, anti-spasmodic and sedative; represented by cod liver oil, atropine, and the bromides.

Dr. J. S. DeJarnette, of Staunton, Va., read a "*Report on Some Recent Literature Regarding Mental Diseases.*"

During the Night's Session,

Remarks upon the Anteflexion of the Uterus

Was the title of a paper read by Honorary Fellow, Dr. George Tucker Harrison, of New York City. The normal position of the uterus in the erect woman, when the blad-

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der and the rectum are empty, is that of anteversio-flexion—the point of flexion being at the junction of the cervix and body. But when the bladder is distended, the uterus is lifted up physiologically, and its posterior wall lies in juxtaposition with the anterior wall of the rectum; it is both retroposed and retroverted. While the bladder is being emptied, the fundus uteri deseribes an arc, which corresponds to an angle of from forty-five to sixty degrees. The characteristic feature of pathological anteflexion is simply the stability of the flexion. The causes which make the flexion permanent, are either in the organ itself, or operate on it from without. Metritic infarctions belong to the first class of causes, while parametritis posterior, or parametritis chronica atrophicus, or perimetritis belong to the second and more frequent and permanent in effects class of causes. When metritis attacks an anteflexed uterus, the angle which, up to that time, had been variable, becomes fixed. The symptoms usually assoctated with anteflexion, are dysmenorrhœa and sterility. This painful dysmenorrhœa is not mechanical, but is due to the associated metritis. The sterility, also, is attributable to the accompanying endometritis, oöphoritis and perimetritis. If these inflammations are removed, and if the perimetritis has left no permanent pathological changes, conception may ensue, notwithstanding the existence of parametric cicatricial tissue or permanent anteflexion. The diagnosis of this pathological anteflexion depends alone on the demonstration of the stability of the flexion. Bimanual palpation, or the establishment of the fact that the anteflexion persists even when the bladder is distended, or the discovery that the folds of Douglas' sac are shortened or thickened, are the means for deciding whether or not as to the durability of the flexion. As to treatment, it is of prime importance to try to remove the parametritis posterior or perimetritis and results. If the uterus is super-sensitive, scarify it just prior to menstruation, and the dysmenorrhœa will be moderated. For the persistent uterine catarrh, wash out the uterine cavity with a solution of carbolic acid after dilatation with aseptic laminaria tents, followed by steel dilators. Lately he has been very much pleased with ichthyol, incorporated with lanolin, applied around the portio vaginalis, in clearing up old peri- and para-metric adhesions.

As a Committee to consider and report next year concerning the proposition as to the propriety of setting apart a portion of each Session to report cases, ask questions, etc.,

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Drs. J. N. Upshur, L. Ashton and Mathews, of Manchester, Va., were appointed.

Dr. L. Ashton, late of Falmouth, Va., but now about to move to Dallas, Texas, was duly elected an Honorary Fellow of the Society, because of his distinction as a practitioner and of the eminently valuable services he has rendered this Society in many ways.

Dr. Joseph T. Logan, of Atlanta, Ga., on nomination by Dr. Oscar Wiley, was also elected an Honorary Fellow of the Society.

Dr. Oscar Wiley, the retiring President, was also elected an Honorary Fellow.

[We regret the necessity of omitting synopses of several papers presented. A number of the authors retained their manuscripts for corrections, and have not forwarded synopses of the same.]

At 10 P. M., the Session adjourned, to partake of a banquet provided by the Springs Management.

Book Notices.

Biography of Ephraim McDowell, M. D., "The Father of Ovariotomy." By his Granddaughter, MARY YOUNG RIDENBAUGH. New York: Charles L. Webster & Co. 1890. 8vo. Pp. 558—xvi. Price, in full Cloth, $4.00; in half Persian Morocco, raised bands, etc., $5.00; in full Morocco, gilt edge, $6.00. Sold only by subscription. (From Authoress.)

It is unfortunate that so many practitioners do not manifest interest enough in what has gone before to read histories of medicine, and biographies of those who have given to it the dignity of a science. Hence we are constantly seeing errors in the record of names, facts and figures in the articles furnished journals, and in the addresses that are delivered with grandiloquent effect before assemblages—errors that would be ludicrous were it not for the fact that the readers and hearers are about as ignorant of biographical history of the great in the profession as the writer or speaker who has copied some misprint or distorted some reference to a fact. McDowell's life should be a preliminary reading of the young graduate, and the old practitioner will always find in the record of his life something that would benefit him. No book could be a more authoritative biography

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than this one, written by an authoress of marked ability for such work, and possessing peculiar advantages to collect all the important facts and records relating to the immortal McDowell. Besides a most excellent biography of McDowell, the authoress has collected, in excellent shape, some "valuable scientific treatises and articles relating to ovariotomy; and eulogistic letters from eminent members of the medical profession in Europe and America." The thoroughness and the excellence of the work may be imagined when it is told that the authoress had the assistance of Col. J. McD. Alexander, of Virginia, and of some 40 or 50 of the most distinguished abdominal surgeons in the world, especially of America. The book should be in the hands of every doctor who cares for the literature of his profession. It would serve admirably well as a present from a grateful patient to his or her physician. The book is illustrated by a fine steel engraving of Dr. McDowell, and by three other plates, representing his first operation in ovariotomy, his residence in which the operation was done, and the monument in Danville, Ky., erected to his memory by the Kentucky State Medical Society.

Lymphatiques des Organes Genitaux de la Femme. Par le Dr. PAUL POIRIER, Professor Agrégé, etc. Paris. Eleven Illustrations. Paris. E. Lecrosnier et Babé, Editeurs. Place de l'Ecole de Medicine. Aux Bureaux du *Progres Medical*. 14, Rue des Carmes 14. 1890. Paper. 8vo. Pp. 60.

This monographic description of the "Lymphatics of the Female Generative Organs," is practically a reprint of articles appearing in Nos. 47, 48, 49 and 50 of *Le Progres Medical* for 1899. After devoting some forty pages to the anatomical description of these lymphatics, the author shows the importance of a proper knowledge of the facts in connection with a proper study of inflammations of the broad ligament, pelvic peritonitis, salpingitis, suppurative ovaritis, etc. It is a valuable publication, especially now, when so much is being written on the inflammations of female pelvic organs.

Experimental Study of Lesions Arising from Severe Concussions. By B. A. WATSON, A. M., M. D., Surgeon to Jersey City and Christ Hospitals, Jersey City, N. J., etc. P. Blakiston, Son & Co. Philadelphia. 1890. Paper. 8vo. Pp. 76. Price, 75 cents.

The 141 experiments consisted in letting the dogs drop

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twenty-five feet on their nates on a plank floor, and were intended to add something to the limited and unsatisfactory knowledge of those lesions discussed by Mr. John Eric Erichsen and Dr. Herbert W. Page, related to injuries, concussions, etc., of the spine, spinal cord, etc. The first conclusion is that concussive accidents never produce pathological changes in the spinal cord, except when great force has been applied to the spinal column. The fifth conclusion is that concussive force, although remotely applied, frequently results in the production of severe and even fatal traumatisms in various organs within the thoracic, abdominal and pelvic cavities. We look upon these as valuable pathological experiments—the details of which as recorded will give much valuable information to the student of spinal and visceral lesions from railroad and other accidents.

Practical Sanitary and Economic Cooking Adapted to Persons of Moderate and Small Means. By MRS. MARY HINMAN ABEL. The Lomb Prize ($500) Essay. Published by the American Public Health Association. 1890. (Dr. Irving A. Watson, of Concord, N. H., Secretary of Association,) 12mo. Pp. 182. Price, Cloth, 40 cts. a copy, or $3 for 10 copies; Paper, 35 cts. a copy, or $2.50 for 10 copies. (Address Essay Department Amer. Pub. Health Ass'n, P. O. Drawer 289, Rochester, N. Y.)

We give the above details because of the great practical value of this Essay to every nurse and housewife. The Prize was well awarded to the book which, if widely introduced among the people of the country, would do an immense deal of good, and would enable the poor especially to have good meals at moderate cost.

Practical Work in the School Room. Part I. *The Human Body.* New York. A Lovell & Co. 1890. Cloth. 12mo. Pp. 107. By SARAH F. BUCKELEW and MARGARET W. LEWIS. From Publishers. 75 cents.

This is a manual used in the primary department of Grammar School 49, New York city. So far as it confines itself to its legitimate work of telling about the parts and functions of the human body, it is an unobjectionable book. But the one-sided ridiculous nonsense about alcohol and tobacco, can result in nothing short of scientific ignorance and damaging fanaticism.

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Transactions of the American Pediatric Society. *First Session.* 1889. Edited by WM. PERRY WATSON. A. M., M, D., Recorder (Jersey City, N. J.). Vol. 1. Printed by J. B. Lippincott Co. 1890. Cloth. 8vo. Pp. 315.

This volume contains the Constitution, By-Laws, and Minutes of the session, etc. But the scientific papers give to it a value of great importance to the profession at large. All of the papers are from good to excellent. The Presidential Address, by Dr. A. Jacobi, of New York, is on "The Relations of Pediatrics to General Medicine."

Editorial.

Medical Society of Virginia.

The limits of our space prevent us from giving as full a synopsis of the proceedings of the recent session in this issue as we had desired. Some of the points deserve more careful consideration than was given the subjects in hand; and with reference to such as may be of general professional interest we will have occasion to speak further when the *Transactions* (which have just been given to the printer) are published.

As to scientific matters, we look upon the discussion on abdominal surgery by the great men who participated in it as of great importance. If it has the desired effect of leading to judicious conservatism in the surgery of women, we would recognize in the recent session of the Virginia Society that incalculable good had been done the profession of this section. Truly has the time come when a halt should be demanded in the abdominal surgery of women. And yet we see nothing in the record of facts and figures presented that justifies the swinging of the pendulum of fanaticism to the extreme opposite of "do nothing locally" for womb diseases. It is not in the local treatment of womb diseases that fault should be found, but adapt the treatment to the demands of the case. Of course it is absurdly foolish to undertake to treat perimetric troubles by punching uterine sounds into the cavity of the uterus—that would be adding fuel to fire. But if, from one cause or another, a simple flexion should arise, or if a simple endometritis were to occur, or if a diagnosis is to be accurately made, then plainly is local treatment or local examination re-

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quired. Roughness in examination, and harshness in the plan of treatment adopted in given cases, are the responsible agents in the development of the diseases which furnish such ample material to specialists in female surgery, and not the facts that a local examination and a judicious local treatment were demanded.

If the effect of the discussion on abdominal surgery, etc., reported in this issue, will only lead to gentleness in examination—the avoidance of hurting the patient—and to the judicious selection of remedies in given cases of purely intra-uterine trouble, then great good will result from the discussion.

We were a little surprised, also, to find such extreme condemnation of Battey's operation as some of the speakers cast upon it. It would seem that some of the speakers had formed their own notions of what Dr. Battey himself has said about the selection of cases for operation, rather than to have carefully read and remembered what he has, in reality, said. If there is one thing above another that Dr. Battey does seek to impress upon those who would venture to do his operation, it is, *not to undertake it until the exhaustion of every other possible means of relief.* In other words, the patient should be a hopeless invalid without the operation; she cannot well be made worse off by the operation. Following this rule of selection of cases, Dr. Battey does present a record of cures that fully sustains his position taken since the immediate enthusiasm of having established a new curative procedure has worn off. And here and there, all over the country, there are patients upon whom Battey's operation has been performed with lasting benefit. Dr. Geo. T. Harrison was undoubtedly correct in his statement that there is, and ever will be, a field for resort to Battey's operation. But the abdominal surgeon, accustomed to say, now-a-days, that the mortality from laparotomies is becoming reduced to almost nothing, and simply detecting irritable ovary and deciding on extirpation, operates inconsiderately and rashly, and of course is not to expect the good results that the conservatively bold Battey and his true followers secure. It is a queer thing that so many otherwise excellent surgeons are singularly wanting in patience. Mechanically they examine, and as if intuitively they diagnose, and on the immediate spur of the moment they decide to operate, or not to operate, and call for the next case.

The admirable paper on "Vertigo," by Dr. L. C. Gray, of

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New York, and the excellently practical discussion which followed, will do incalculable good.

Dr. Hunter McGuire's paper on cases of nervous (?) troubles following stricture of urethra opens up for further study a new field along an old route. Syphilis being excluded by diagnosis, it is difficult to appreciate how the many cases of sudden death, apoplexy, etc., referred to by the several speakers, can be traced to the strictures as a cause. And yet it is of daily observation to witness the many remote reflexes due to irritations of the genito-urinary track. For the present, the cases reported and referred to, with their antecedents, must be kept on file for further investigation.

As to the business transactions, it should be noted that, hereafter, all applicants for Fellowship in the Society must be graduates of a reputable medical school or college.

As to future programmes, a committee is to report at the next session upon the propriety of doing away with simply reporters on advances in the several departments of medical science, and substituting therefor writers of essays on subjects of their own selection, who are to serve also as leaders in discussions arising on their papers, etc.

The Dr. Hunter McGuire Prize Offer of $100, to be awarded to the author of the best essay on a given subject, is a most laudable step. The subject for the next session will soon be announced, and is open for contest to the Fellows of the Society, and to regular practitioners in West Virginia and North Carolina. The recipient of the recently awarded prize—Dr. R. M. Slaughter, of Theological Semiary, Va.—has long been known as one of the best informed of the many doctors in Virginia of studious habits. We publish the Essay in full as Article I in this issue, in order that all may judge of its merits. There were five other contestants, and each of them is well spoken of by those who examined their papers.

The great courtesy shown the Society by Dr. McGuire in giving this prize during the last session, and in offering to do so again next session, was acknowledged by a very special vote of thanks. Dr. McGuire continually has the interests of the Society at heart.

Dr. William W. Parker, of Richmond, Va., the President-elect, is so well known throughout the State for his influence and indefatigable energy, and he is so thoroughly in sympathy with every interest of the Society, that we have a right to expect great good from his year of official direction.

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Dr. L. Ashton, who has labored so earnestly and so successfully for the interests of the Society during the many years of his residence in this State, but who is just now removing to Dallas, Texas, richly merited the unique compliment bestowed upon him by his unanimous election as an Honorary Fellow of the Society. His able services as a member of the Board of Medical Examiners of Virginia have won for him praise at the hands of his associates, and of the gentlemen who have been examined by him. As a practitioner, he was successful and popular; and Texas secures, in having him as a citizen, a most excellent gentleman and worthy physician.

Few State Societies can boast of having, on an ordinary occasion, visitors of greater distinction than those who usually attend the annual sessions of this Society. The visitors this year were Drs. Geo. Tucker Harrison and Landon Carter Gray, of New York city; Joseph Price and Joseph Hoffman, of Philadelphia; Edwin Ricketts, of Cincinnati; and George Herndon, of the United States Navy—all men in the prime of life, and fast becoming the recognized leaders of medical and surgical thought and practice throughout the United States.

The Resident Physician, during the Springs' season, Dr. J. Edgar Chancellor, of University of Virginia, was made the "spokesman" for the famous Rockbridge Alum Springs Company in extending the hospitalities of the place and showing the courtesies of the occasion. As to the banquet given by the Management, we wish to reiterate that portion of the first sentence beginning the report of the proceedings in this issue with reference to banquet—with ladies and without wine.

A feature always of interest during Conventions of doctors—especially country doctors who are out of the reach of the "sample man"—was the *exhibition hall* for the display of instruments, pharmaceutical products, etc. The Virginia Pharmacal Company, of Richmond, Va., had a sample lot of its pharmaceutical products. This Company, organized a year ago with the best of equipments, is competing with such manufacturers as Merck, Squibb, etc., as to the excellence and full standard value of its preparations. Messrs. Henry K. Wampole & Co., of Philadelphia, Pa., through their very popular representative, made a lasting impression; and the value of the samples distributed will lead many a doctor to adopt their manufactures. The Phenique

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Chemical Company, of St. Louis, distributed large sample quantities of their wonderful product, Campho-Phenique, which is a powerful disinfectant and antiseptic, and useful as a local anæsthetic. The popular firm of Roanoke, Va., Messrs. Budwell & Christian, distributed full-size bottles of Budwell's Emulsion of Cod-Liver Oil, etc.—thus doing good to many in need of such generosity; for that preparation has long since become established in the confidence of the profession. Messrs. Tarrant & Company, through their genial representative, made many friends, while their Hoff's Malt Extract spoke for itself as being the genuine article. In the surgical instrument line, Mr. Charles Lentz, of Philadelphia, was present with an immense assortment of new and established instruments, appliances, etc. It did seem that he had at hand exactly the instruments that the doctors wanted, for his sales were very large. It is a first-rate house, anyhow.

Liebig Laboratory and Chemical Works Company.

Having become convinced that this Company is not an honestly straightforward one, we wish to withdraw any and every commendatory notice that we may have given it during the time that we were deceived. We have given the Company ample opportunities to remove the suspicion of trickery, but it has not even so much as offered an explanation.

Much Valuable Material,

Which we had prepared for this number, will have to lie over till the November issue—although this number contains several more pages than usual.

One of Reed & Carnrick's Extensive Factories,

at Goshen, N. Y., was destroyed by fire on the 10th September. This factory was devoted wholly to the production of their Soluble Food and Lacto-Preparata, and contained extensive and valuable machinery. They had considerable stock of these Foods at their New York office, and consequently there will be no delay in filling orders. The factory will be at once rebuilt three times the size of the one burned, with machinery correspondingly enlarged.—*Dietet. Gazette.*

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Original Communications.

ART. I.—Notes on the Use of "Aristol," as a Substitute for Iodoform in the Treatment of Diseases of the Skin, and for Other Surgical Purposes.*

By THOMAS N. McLAUGHLIN, M. D.

LATE PHYSICIAN-IN-CHIEF, PHILADELPHIA HOSPITAL; LECTURER ON DERMATOLOGY, MEDICAL DEPARTMENT, NATIONAL UNIVERSITY, WASHINGTON D. C.; ATTENDING DERMATOLOGIST, WASHINGTON DISPENSARY FOR SKIN DISEASES; MEMBER OF THE MEDICAL ASSOCIATION, AND OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA, ETC.

Since the introduction of iodoform as an antiseptic, the remedy has proved to be of incalculable value to the dermatologist, as well as to the surgeon, on account of its stimulating, alterative and sedative properties. But while freely acknowledging its excellent virtues, it also possesses certain disagreeable properties, which have, at times, made its constant employment a matter for very serious consideration, on account of its toxic effect when used over a large surface, or in a considerable quantity, as well as on account of its horrible odor.

With a view of overcoming these defects, advanced and enterprising chemists have been at work trying to discover

* Read before the Medical Society of the District of Columbia.

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a substitute for iodoform—one possessing all of its good properties without any of its disadvantages; and as a result of their numerous experiments, they have furnished us with a product named "Aristol."

Since the amount of literature relating to the chemical properties of this preparation is very limited, I cannot do better than to state the matter which has been so clearly presented by Dr. P. J. Eichhoff, Physician to the Dermatological and Syphilological Departments of the Municipal Hospital in Elberfeld, for the details of which he expresses himself as being indebted to the *Farbenfabriken:*

"If a solution of iodine in iodide of potassium is poured into an alkaline solution of thymol, a compound of iodine with thymol is thrown down as a reddish brown precipitate; it is amorphous, and cannot be crystallized from its solution in ether. From the insolubility of the body in alkalies, one may suppose that a hydrogen atom of the hydroxyl group of thymol is replaced by iodine—that is, the O H group is converted into O I—that is, an iodoxyl compound is formed."

"'Aristol' is insoluble in alcohol, glycerin and water; it is easily soluble in ether, being, however, precipitated from the solution by the addition of alcohol; it is also easily soluble in the fatty oils. To guard against decomposition, it should not be exposed to light, and on the same account solutions should be prepared in the cold."

I shall, in a general way, without entering into the details of each case, state the *results obtained from its use in the treatment of certain skin eruptions.* I have compared its action with the results obtained from the use of other preparations while treating similar conditions:

CASE I.—Female, 40 years of age, suffering with *eczema. (papulo-pustulosum.)* The hands and arms were extensively involved. The surfaces were so moist and sensitive that she was unable to use her hands. I prescribed—

℞. Aristol.....3j.
Lanoline.....3vij.

M. Make an ointment. Sig. To be applied three times a day, so as to keep the surfaces constantly covered. The benefit derived was very marked. The improvement was

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immediate, and in a very short time she was discharged, cured.

CASES II AND III.—Also suffered with *eczema (squamosum.)* The same formula was prescribed. Both cases yielded promptly to treatment.

CASES IV AND V.—Suffered with *psoriasis*. The diseased surfaces were first washed with alcohol and sapo-viridis ää q. s., then dried, and dusted with "aristol." The surface was then covered with collodion. This allayed all irritation, stimulated the surfaces, and rapidly removed all appearances of the eruption—without any pain, discoloration, or annoyance to the patient, as would have been caused had chrysarobin, pyrogallic acid, or tar, been employed. This dressing was removed every third day.

CASES VI AND VII.—Also suffered with *psoriasis*, and were treated with the soap and alcohol solution, and afterwards with an ointment of one part of "Aristol" to seven parts of lanoline. The result was not as satisfactory on account of the dressing being removed by friction, the clothing rubbing the surfaces. The collodion dressing furnished much better results.

CASES VIII AND IX.—Suffering with *tinea versicolor*. Chrysarobin had been employed about the neck, and the discoloration and irritation were very marked. Collodion and aristol were applied to the eruption upon the chest, and the improvement has thus far been satisfactory. It too soon for me to report as to the permanent effect produced.

CASE X.—A female, 28 years of age, suffering with *lupus erythematosus*, which eruption has existed for eight years. The left cheek was covered with an eruption, extending from the lower border of the jaw to a line drawn from the inner angle of the eye, to the scalp, extending to the ear. Various remedies had been employed in the treatment without any definite effect being produced. This surface was dressed with aristol and collodion every other day. The improvement has been constant, and the surface presents an entirely different appearance to what it did.

The patch is only half of its original size. The scales have entirely disappeared, the surface is much paler, and the dressing causes her no inconvenience. There has been a very decided improvement.

All of these eruptive conditions were of a chronic character.

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I have faithfully watched its effect, with a view of thoroughly testing its medicinal properties, when employed for dermatological purposes.

I have also observed *its action in a number of surgical cases*, having employed it for the same purposes, and in the same manner, as I usually prescribe iodoform:

CASE I.—Male, 30 years of age, suffering with a *superficial ulcer* upon the right leg. Produced two weeks before coming under my care by falling through an opening in the floor of a building and striking the limb against the rafters. The ulcer was the size of a silver dollar, the edges were unhealthy, the ulcer very irritable and painful, the discharge quite copious. It was washed with a solution of hydrarg. bichlorid., 1–1000, painted with a solution of nitrate of silver, 60 grains to the ounce, and then dressed with a thick covering of aristol, which was retained in position by an outer coating of collodion. This dressing was removed in three days by mopping the surface with absorbent cotton saturated with ether. The ulcer was at this time less than one-half of its original size. Healthy in appearance. The dressing was removed, and in four days again removed, the ulcer having entirely healed. This dressing required no bandage, or any attention from the patient, being clean and odorless.

CASE II.—A young woman, 18 years of age, suffering with *scrofulosis*. She was a domestic, and her duties required her to be upon her feet all day. She had been suffering with a large ulcer, three inches square, upon the left leg, four inches above the ankle, for several months. The ulcer was indolent, with unhealthy granulations and indurated border. I painted the surface with a solution of nitric acid 1–4, and then washed it with a solution of hydrarg. bichlorid., 1–1000. After drying the surface, it was thickly dusted with aristol and covered with collodion. In three days the dressing was removed. The ulceration had completely changed in appearance. The granulations were healthy, discharge not offensive and not copious, borders soft and healthy. Dressing renewed. This was re-applied four times, when the patient was discharged, cured.

This patient was also suffering with a deep sinus in the neck, which was packed with aristol and gauze. The discharge was soon checked, pain allayed, and in ten days was entirely well.

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CASE III.—A female, 30 years of age, was operated upon eighteen months before she came under my care for *carcinoma*. Upon examination, I found a large carcinoma of right groin, all the inguinal glands being involved by secondary growth, the primary lesion affecting the vulva. Several incisions had been made in order to evacuate abscesses which had formed. The growth was very painful, with a tendency to bleed. The discharge was copious, and very offensive. The surfaces and sinuses I covered with aristol. In forty-eight hours a decided improvement had been produced. The pain was less, the discharge greatly reduced, the odor completely changed. In a fortnight, the growth was less exuberant, the inflammation much reduced, and the general condition of the patient decidedly more comfortable. As long as this dressing was employed, this improvement continued. Of course it did not arrest the progress of the disease, but arrested the suppuration in a measure.

CASE IV.—A female, upon whom an operation (laparotomy) had been performed, presented for treatment a *deep sinus*, leading to a pus-secreting cavity, about two inches long and one inch in width. This wound had been dressed by first stimulating the surfaces with a solution of nitrate of silver, and then dusting them with iodoform, without any marked benefit being derived. Aristol was then used as a substitute. In three days' time the secretion of pus had been checked entirely, and in ten days the wound had healed.

CASES V AND VI.—Suffering with *herpes progenitalis*, were dressed by dusting the surfaces of the ulcerations with aristol three times a day. They healed very rapidly. A tonic course of treatment was employed at the same time.

CASES VII, VIII AND IX.—Were cases of *chancroids*, which were dusted with aristol three times a day. It allayed the pain and irritation, diminished the amount of discharge, and stimulated the sores to a healthy action. They improved more rapidly than similar cases which were being treated at the same time by different methods. These sores were first washed with hydrargyrum bichloridum solution 1–1000.

CASE X.—*Suppurating bubo*, which had been incised. The wound had been packed with iodoform gauze; but as the healing was so very slow, I substituted aristol for the iodoform, with the effect of checking the discharge and healing the sinus in a few days.

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I have drawn the following conclusions, after observing its action during the past five months:

1. The drug is free from all objectionable odors.

2. When used over large surfaces, you obtain all of its medicinal effects without any toxic effect. It is not absorbed.

3. It possesses stimulating, alterative, and anæsthetic properties; the latter effect less marked than that obtained from iodoform.

4. It does not produce any discoloration of the skin.

5. On account of its dark color, you can readily observe how far the powder has been used on a diseased surface.

6. It is not irritating, and its use is not contra-indicated in the treatment of facial eruptions, as chrysarobin and pyrogallic acid.

7. It appears to possess the necessary properties to make it an efficient substitute for iodoform.

825 *Fourteenth Street, N. W.*

ART. II.—**Notes on Diabetes.**

By A. ATKINSON, M. D., of Baltimore, Md.

LATE PROFESSOR MATERIA MEDICA AND OF DISEASES OF THE SKIN, ETC.

Luckily diabetes is a less common affection than consumption or Bright's disease, as with the almost certainty of issue, we have some agents in these other diseases which are sometimes efficacious, without the severe restrictions on the part of the patient. In this trouble, proper direction of the diet is the *sine qua non* for anything like a favorable result.

Cantani suggested lactic acid with an exclusively meat regimen, as capable of furnishing the material at fault in the liver. Both he and Dr. Balfour found several cases to improve more during its use than by any other means; the amount of urine falling to the normal quantity and becoming free from sugar, and the patients regaining flesh and strength. They gave two to four drachms diluted in twelve

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ounces of water, in the twenty-four hours. Dilute nitric acid appears to lessen the diabetic thirst, and for both, the thirst and quantity of sugar, dilute phosphoric acid acted in a remarkable manner, also lessening greatly the amount of urine. The phosphate and carbonate of ammonium both lessened the amount of urine and the sugar formation. Arsenious acid has proved efficacious in this disease, probably owing to the tonic properties of the drug. Common yeast has been praised as capable of changing starch directly into alcohol without passing through the sugar stage, and in some cases the sugar disappears altogether from the urine, while some of the patients become very drunk. Iron is one of the best *adjuncts* to a meat diet, tending to keep up the general strength, and Basham's mixture is a favorite here as well as in Bright's disease. Glycerin has had its advocates on the idea that it furnished sugar, thus relieving the general system of the burden, but without any special good, save that of preventing emaciation. Milk in every form has been largely praised in this disease, and lime water has its advocates as a remedy, capable not only of abating thirst and hunger, but of really lessening sugar. But probably *opium*, in some of its many forms, is chief among drugs in cutting short the amount of sugar in diabetic urine. Common chloride of sodium given in water is said to reduce the flow of urine and amount of its salts. The salts of strychnia are said to have *cured* cases of diabetes, and for this reason we may expect good from such preparations of the compound hypophosphites which have strychnia in them. Dr. Tyson, of Philadelphia, thinks highly of ergot, giving three pills of ergot a day, each pill representing about thirty drops of the fluid extract. Perhaps the strongest medicine in diabetes is the apple, the sourer the better; the following being a brief history of a case in point:

Mr. L., of Lancaster, Penn., was to consult me a few years since because of excessive accumulation of sugar in his urine. He was not heard from for several years, when last Spring I received a letter from him informing me he

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was about to send per express a bottle of his urine for examination. What I remember of the urine when I examined it first was especially its high specific gravity. I do not recollect what processes I used to reveal the sugar. Soon after he came on himself, and having notified me as to the hour he would visit my office, I was in to meet him.

He looked remarkably well, weighing all, I should say, of 200 pounds, which is about his usual weight now. After a little talk about the matter in his urine, I elicited what information I could get from him about his case. He informed me that he did nothing special in a therapeutic way for his trouble, for do what he might, he found his water charged more or less with saccharine matter; that just as soon as he found the specific gravity jumping up, he had to abstain from all starchy and saccharine materials, confining himself chiefly to meat diet, which to this day he keeps up in a general way.

The "*Hospital*," a London paper, says: "Chemically, the apple is composed of vegetable fibre, albumen, sugar, gum, chlorophyll, malic acid, gallic acid, lime and much water. Furthermore, the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. This phosphorus is admirably adapted for renewing the essential nervous matter, lethlcin, of the brain and spinal cord. It is, perhaps, for the same reason that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves growing feeble and infirm, resorted to this fruit for renewing their powers of mind and body. Also, the acids of the apple are of signal use for men of sedentary habits, whose livers are sluggish in action; these acids serving to eliminate from the body noxious matters, which, if retained, make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles.

"Some such experience must have led to our custom of taking apple sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also the fact that such fresh fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach rather than provoke it. Their vegetable salts and juices are converted into alkaline carbonates, which counteract acidity.

"A good ripe, raw apple is one of the easiest of vegetable

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substances for the stomach to deal with, the whole process of its digestion being completed in eighty-five minutes. Gefrard found that the 'pulpe of roasted apples mixed in a wine-quart of faire water, and labored together until it comes to be as apples and ale—which we call lambeswool—never faileth in certain diseases of the raines, which myself hath often proved, and gained thereby both crownes and credit.' 'The paring of an apple, cut somewhat thick, and the inside whereof is laid to hot, burning or running eyes at night, when the party goes to bed, and is tied or bound to the same, doth help the trouble very speedily, and contrary to expectation—an excellent secret."

"A poultice made of rotten apples is of very common use in Lincolnshire for the cure of weak or rheumatic eyes. Likewise in the Hotel des Invalides, at Paris, an apple poultice is used commonly for inflamed eyes, the apple being roasted and its pulp applied over the eyes without any intervening substance. Long ago it was said apples do easily and speedily pass through the belly; therefore they do mollify the belly; and, for the same reason, a modern maxim teaches that: To eat an apple going to bed, the doctor then will beg his bread."

As near as I could copy his words at the time, he informed me that Bethesda water reduced his thirst very much, at the same time lessening the specific gravity of his urine, just as a large quantity of any *light pure water* would do by *sluicing* the kidneys. He drank freely of the Bethesda water. He lived for three weeks consecutively on skimmed milk, and absolutely took nothing else. All this he endured without the least feeling of disgust. During the day while confining himself thus absolutely to the skimmed milk, he found the specific gravity of his urine would vary from 1.04 to 1.010, keeping up large amounts of water to alleviate the thirst, and thus keep down the specific gravity usually so high in all saccharine urine.

Accordingly, he found, as the milk would pass through the kidneys, invariably in the morning on rising, the urine would stand at specific gravity 1.010. At the end of three weeks of the *constant* use of skimmed milk, he ventured on a little meat, but no bread at all, and the amount of sugar showed itself to have risen very plainly and very "*greatly*." He used the meat only three days, when he found he was forced to suspend it.

At this time (the time of his visit to me in the Spring of 1889) he eats what he chooses. He has ceased to take any

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steps against the appearance of sugar in his water, so long as his general health continues good, and so long as he is not greatly distressed by the thirst which a few years ago appeared to consume him. He fell off at one time from 210 to 194 pounds, but as soon as he took to diet, his flesh returned. He now eats what he chooses in season, taking care not to overindulge, or to partake of kinds of food which he has learned from experience to disagree with him. His favorite mode of ascertaining the specific gravity of his water, is by the yeast plan, using the horse-shoe tube.

Dr. Winters, a diabetic friend, of Lancaster, Co., Penn., used a *great* deal of cider (sweet); he voided very large quantities of urine, but he soon found that the sweet cider produced *too much* sugar, and was compelled to discontinue its use. Thus we see that the cider consists only of the juice of the apple, yet every kind of cider will not answer in diabetes.

This gentleman makes one-fourth of his diet now consist of green (that is, uncooked) apples. He often uses them to the exclusion of all other food. He prefers, as best suited to the non- formation of sugary urine, the so-called smoke-house apple, which is very tart (acid); that is, it is full of malic acid, without the accompanying sugar we find in the Sweetning and other apples, commonly with green or yellow skins like the yellow June apple. When this smoke-house apple is fresh (green) from the tree, it bites the tongue from its excessive tartness, making fissures in the mucous membrane. Mr. L. uses as many as a quarter of a peck, when they are in season, of these apples each day. It is not an apple which keeps at all well, 'tis one of the early *sour* apples. As the apple ages, it loses its sourness, and does not then serve him as food capable of averting sugar.

A gentleman of Wilmington, Del., is diabetic, and is on sour apples when they can be had, and he thanks Mr. L. for his improvement during the season of sour apples. Mr. Overback, of Lewisburgh, Pa., was also benefitted by apples.

Again, Mr. L. has lived for three weeks on skimmed milk and cottage cheese (smearkase), the result being that he did not see that in his case the milk did a particle of good, despite the theory advanced by Duncan, who claims that some recover on it, and such as did not entirely recover, were greatly benefitted. Mr. L. thinks any other diet to reduce the system as much as he did would have done him fully as much good. Dr. Austin Flint forbade Mr. L. the

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use of milk entirely, and he abstained from it continuously as a diet; and under the sour apple diet, and by taking the salicylate of cinchonidia in prescribed doses three times a day, he had the rheumatism of the right arm, and he wondered why he should have had it. He has since noticed that he has always had less rheumatism when he does not use this salicylate of cinchonidia, strange to say, than when he does use it.

Now, I do not see any great trouble in assigning a reason for the fact that he has more or less rheumatism while using the sour apples and the salicylate.

We all know that lactic acid injected, in a diluted state, into the flesh of a man will inflict him with more or less rheumatic pains; and I have read where the same acid has given rise, by the hypodermic method, to genuine attacks of rheumatism. We should consider too another cause for the rheumatism. In such persons as are inclined to rheumatism, even less things than sour milk will bring on an attack.

Mr. L. found that under the sour apples and the salicylate of cinchonidia, and a tea made from the bugleweed (the Lycopus Virginicus—See Peyre Porcher, page 441), they acted like a charm in his case on the specific gravity of the urine, and in lessening also the appreciative quantity of sugar. When the specific gravity was 1.048, he would notice the crystals left on the floor the morning after urinating, and if a few drops were left on a *clean* glass surface, the next morning he could find scales of sugar. At times his saliva would yield particles of sugar on spitting to keep the saliva from his clothing, so that the dryness of the mouth caused the saliva to scatter over the clothes. His jaw was almost full of sugar, so to speak. This very sweet taste varied at different times, increasing during cold weather.

In six months the salicylate lost its effect. He tried lactic acid, which failed entirely in his case.

The bromide of arsenic solution he thought had a good effect so long as he continued it, but did not compare in efficacy with the salicylate of cinchonidia. Nor did any

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other medicine begin to compare with this salicylate salt. Now, may not this fact point out a lesson to us in the future? May we not, with reasonable hope of success, try, in our very next case, the different salicylates in this disease? May we not, however, prefer in most cases, because attended with debility, the salicylate of cinchonidia? Or in cases where we find even more depression, may we not hope for good from the salicylate of iron, which I referred to some years ago as a good preparation from which to procure the best effects both of the salicylic acid and the metallic remedy? Where we do not encounter much special need of strengthening tonics, I should expect the free use of the lithium salicylate to be especially useful in such cases, especially if there were much acidity of the urine, and I would be very apt to combine it with or alternate it with some form of arsenic alone, or with arsenic and bromine combined.

In a brief scattered sketch like this it is difficult even to enlarge on one's views, but it does appear, that some such combination as the salicylate of lithia and the bromide of lithium might be of service, given with the solution of arsenite of potassium in such doses as would give the full effects of the salicylate and the bromide, *without* pushing the *arsenious remedy* beyond *proper tolerance* and prudence. In cases where we derive good from the mineral waters, we expect to use them for a prolonged period, and in like manner we should use the above named remedies cautiously, until we obtain the salicylate effect, the bromine effect, and the arsenic effect—especially when we find the condition so often obtaining, where boils and abscesses form during the progress of a case of diabetes mellitus. This gentleman never had boils or abscesses, nor serous inflammations. The only things which disturb him are the thirst and the large passage of urine.

Mr. H., a diabetic, of Frederick, Md., passes very large amounts of water each day, as much as five gallons. He kept a bottle behind the store counter for making water in. One day a lot of fellows stole the bottle of urine, and on his

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way home he found a fellow puking in the alley. The man asked him if he had any poison in his saloon. He said, "Yes! Come down to the doctor at once," who brought him all right. Mr. H. says he feels when in the water-closet that he cannot leave it. He is very much reduced.

Mr. L. was formerly inclined to diarrhœa, but now tends rather to costiveness. He says the Bethesda is very grateful in alleviating the thirst only.

Strange that the same solution of bromide of arsenic has been found useful in asthma that we have used to advantage in diabetes, and how unfortunate that one of the few agents proving useful in a condition like diabetes should be the very one which should be classed among the cumulative poisons. Surely we ought to find in one or the other of the natural kingdoms one or more agents, which, alone or combined, *must prove useful* in alleviating the suffering from intense thirst in the truly diabetic, and in antagonizing therapeutically, as well as physiologically, the dire effects of what has been regarded as a necessarily fatal disease. My own idea is that the original condition predisposing to and keeping up this saccharine formation in the blood and urine—indeed, throughout all the fluids of the body— is rather a diathesis than an actual disease, and as long as we can keep it in abeyance, we stave off the certainty of great emaciation attending the true disease when once it has *bona fide* set in. The above refers to the sugary form of diabetes, and not to that variety where we find an increased flow of urine of very low specific gravity, and where no sugar obtains, but more or less thirst, accompanied by muscular weakness and chilly sensations.

The writer once attended an old gentlemen who had prostatic enlargement, and who during the night would dribble on the matting of his room quite a quantity of residuary urine; the next morning scales of sugar could be scooped up from the floor. This old gentleman voided a prodigious amount of urine, and his obesity was cumbersome to him, refuting the idea, so often entertained, that exhaustive diseases must of necessity be attended by emaciation. The most distressing diabetic patient I ever saw was a young

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woman who fell off to a skeleton, and who, after having repeated abscesses and boils, at last succumbed to pleurisy.

I would suggest *the free use*, as a drink in diabetes mellitus, of the Bromine-Arsenic Water. The late Prof. J. Staige Davis, of the University of Virginia, and for many years Resident Physician to the Rockbridge Alum Springs, thought this water ought to be of service in this affection, possessing powerful alterative action on all the secretory and excretory organs, softening the skin, promoting the growth of hair on the head, and clearing up the cloudiness of the skin following chronic liver troubles, besides exerting an especially happy action on all chronic skin troubles, whether constitutional or not.

Whatever improves the tone of the stomach, preventing the occurrence of dyspeptic symptoms and improving the appetite, always does good in diabetic troubles, and one would naturally turn to the water of the Blue Ridge Spring in Virginia as a water which, taken in *sufficient quantity*, ought to go far in preventing the formation of a deleterious agent, which appears to be the result of incomplete digestion of the starchy materials in the food.

Mr. L. can stop the excessive flow of urine by taking six to eight grains of opium a day, but he prefers to let the drug alone. It acts thus: he wants to make his water, but the neck of the bladder refuses to relax, and there is retention to a certain extent. He says the opium *certainly* lessens the secretion, and if it was not for the harmful nature of the drug he would experiment fully with it in his own person so as to reach its full physiological action. He only used the opium at such intervals as he found he made excessive amount of water—say for a week, long enough to get the skin to itch, the pupils contracted, and the bowels constipated, with some little nausea, he being but little given to sick stomach.

When he was last in my office, a year ago, he had a form of indigestion, which made him feel "rugged and mean," which he ascribed to the diabetic trouble, but he had lived consecutively for three weeks on skimmed milk and cottage cheese, as by the plan of Dr. Duncan, of London, but it was a failure in his case. If he had dieted on any other article of food, he says, he would have been benefited to the

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same degree. Every two weeks he would clog up like a bilious man, with coated tongue and constipation. He took to drinking the sour California wines, or the so-called Rhine wines, all white only. He wanted the acid of the wine, which cleared off the bilious feeling, the wine giving rather soft stools every second day.

During the last two weeks he has used a great many lemons, and has not felt so well for the past five years as he has during their use, taking eight a day regularly.

Summing all up, then, he contends that his body is a sugar refinery, and he needs all the acid he can get to counteract the tendency to the formation of sugar in his system, and for that reason he would advise physicians treating diabetes to try *how much acid* (vegetable acid) they can safely *crowd* into their patients without stomach derangement. Sour wine in his case had no effect on the specific gravity.

When asked the effect of ergot he gave the case of a Mr. Bumgardner, who was relieved *simply by ergot*. Mr. B. lives in Lancaster, and was treated by Dr. Roher, of that city.

Mr. L. took ergot and iron in *free doses*, but with *no effect*. He finds that since using the lemons he rests well, and does not have to get up to urinate but once during the night, thus prolonging the relief from 2½ to 4½ o'clock, say two hours, showing an arrest of secretion of urinous fluid to that extent.

Again, since last spring he has been indulging, and especially since he began using the lemons and the sour wines, he can partake of white bread (flour), corn bread, and all starchy substances, but no sugar.

April 23d,, 1890. This morning he ate beefsteak, corn cakes, plenty of butter, and he eats *one full* meal of wheat bread a day, as much at the time as any other man would want. He thinks butter is as bad in general for a diabetic as starch. He does not approve of sudden and rigid change to an abstemious diet, but says keep away, as far as possible, from starchy materials, eating largely of apples and other fruit of a sour nature. If the sugar in the fruit is harmful, the acid in the same will correct it, and fruits constitute food which diabetics crave and need.

Mr. L. thinks if he has taken any medicine which has done him *real good* he is not aware of it, though he has gone through the list of therapeutic remedies. He cannot say he derived any good from Clements' Solution of Bromide of Arsenic, though so many in the profession think

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well of it, but that a Dr. Winters, of Goodville, Lancaster Co., Pa., did derive much service from it. He was a confirmed diabetic, to such an extent that he could hardly stay in his buggy, so great was his thirst to stop and drink at each stream as he drove along the roads. He consulted Dr. Varicks, of Jersey City, late surgeon-general of New Jersey, who relieved him of the intense head suffering by a seton, and put him on Clement's Solution. Dr. Winters for years *ate what he wanted*, say *mashed potatoes*, etc., without caution or distress, with now and then a return to a slight extent of sugar in his urine. He claimed that the *knowledge* that one has the disease does him great harm, and his advice to Mr. L. was to go straight home and attend to his business, and not allow his condition to prey on his mind. He claimed that lots of diabetics pass through life without knowing of its existence.

On Good Friday last, Mr. L. was very despondent, very weak for the want of meat (he is a good Catholic); he was in great trouble, so that the day before he ate quite a lot of Sweitzer cheese and drank a lot of sour wine, all of which deranged his stomach, rendering him weak and feeble the next day.

On Saturday he felt all right, having supplied the inner man bountifully by breakfasting on full meat and bread allowance. Before he took the lemons, he felt tired and languid before eating, especially if the meal was delayed, and also after eating. Since he used the lemons he can delay the meal without much discomfort, and after the meal he is comfortable, and at this writing he feels better than eight-tenths of the human race, he says.

I have given the above notes on diabetes, hoping to elicit thereby some later information as to the treatment which experience has proved most serviceable in this obscure affection.

. **La Grippe** does not seem to have died out. Every now and then a case yet occurs, and some of those who had the disease during the prevalence of the epidemic last winter are having repetitions of the attack this fall. Dr. I. N. Love, of St, Louis, after trying a number of remedies, says that the sheet-anchor of treatment in these cases is the following: Acetanilid ʒj, Tongaline ʒiij, Elixir of Lactopeptine ʒiij—Mix. S. Take a dessertspoonful every two to four hours, with, in some cases, carbonate of soda.

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ART. III.—Locomotor Ataxia.*

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Synonyms.—Locomotor ataxia or ataxy, progressive locomotor ataxia, Duchenne's disease, gray degeneration of the posterior columns, atrophy of the spinal marrow, and tabes dorsalis, are the various names by which the disease is known.

History.—Locomotor ataxia was evidently known to the old masters, and in 1679 Bounet appears to have revived the name of tabes dorsalis, but W. Horn's description in 1827 was the first in which it was recognized as a distinct type of disease. In 1847, Todd and Cruveilhier located the lesion in the posterior columns of the cord, and showed that the characteristic symptoms were not caused by paralysis, but by want of co-ordination. About 1851, Romberg's monograph appeared, and in 1858 Duchenne wrote a most excellent and accurate description; hence he was regarded as the discoverer of the disease, which was named for him "Duchenne's disease."

Sir William Gull is credited with the first notice of *gastric crises*, in Guy's Hospital Reports for 1859; and seven years later Delamarre, in a thesis, gave them more extended notice.

To the eminent Frenchman, Charcot, belongs the credit of first observing the peculiar affection of the joints, called arthropathies.

Connected with the evolution of this interesting disease are such names as Pierret, Bouchard, Chauvét, Déjerine, of France; Westphal, Erb, Goll, Leyden, Türck, Tuczek, Strümpell, Friedrich, of Germany; Gowers, Ross, Stewart, Lockhart Clark, of England; Mitchell, Rockwell, Putnam, Bird-

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sall, Hammond, Seguin, and Spitzka, of the United States; and Sakaky, of Japan.

Definition.—Locomotor ataxia may be defined as a chronic degenerative, symmetrical disease of the nerve elements in the posterior columns of the spinal cord, extending mainly in a longitudinal direction, characterized by peculiar neuralgic pains, early loss of patella-tendon, and other reflexes, by loss of muscular co-ordination, especially in the lower extremities, and various other symptoms affecting the viscera, joints, or the organs of special sense.

Etiology.—*Heredity*, according to recent authorities, is of little consequence; though of the first importance in the kindred disease, Friedrich's ataxia.

Age.—It usually begins between the ages of 25 and 50, though, according to Spitzka, "age seems to have no special determining influence * * * some cases of infantile tabes have been recorded."

Sex.—It is much more frequently found in the male. It is generally admitted that at least ten males are affected to one female, and Spitzka, Rockwell, Birdsall, Seguin, and Putnam, have found the ratio twenty-seven to one.

Occupation.—Occupations requiring much exposure to cold and wet, especially of the lower extremities; so that soldiers and sailors are frequently affected.

Toxic Agents.—Absinthe, illuminating gas, arsenic, barium, cyanogen, chloral, alcohol, ergot, and tobacco, have all been credited with producing tabes, but, as a rule, not the regular form of the disease. Tuczek has shown that ergot poisoning produces a disease which, in symptoms and morbid anatomy, is almost a counterpart of tabes. Strümpell has seen two cases very much resembling tabes produced by long working in tobacco—the chief difference being the existence of a marked tremor in nicotine tabes.

Possibly many of the cases of alcoholic tabes are really multiple neuritis. Mental or physical shock, worry, certain injuries, as concussion of the spine, or even fracture of a bone, diphtheria, or the puerperal state, are given as causes.

Sexual Excess.—On this point authors differ, though form-

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erly it was customary to attribute all cases to sexual excess; *apropos*, of which, Spitzka relates that when the poet Heine was dying, from an affection of the cord, it so happened that two other literary characters of Paris were affected with tabes. All three being popularly regarded as libidinous, one of their contemporaries improved the occasion by writing a manifesto addressed to the "gilded youth," closing with the apostrophe: "Let us guard our spinal cords."

Strümpell says: "It is an utterly ungrounded assertion that sexual excesses may be the cause of locomotor ataxia." On the other hand, Bastian, Hamilton, Leyden, Ross, Spitzka, and many others, attribute more or less importance to the abuse of the sexual functions.

Spitzka states that eighteen of twenty-three tabetics admitted practicing onanism in its scriptural meaning, and that he has occasionally (in three cases) seen ataxia in the worst form of masturbators.

Syphilis.—Here there are also different shades of opinion, though all admit its agency, either as a predisposing or exciting factor.

Bastian says that syphilis, as a cause, has been greatly overrated, and that it has not existed in one-fourth of the numerous cases of locomotor ataxia that have come under his observation, and Ross pretty well agrees with him.

Andronico, after careful study of the subject, regards syphilis rather in the nature of a predisposing than an exciting cause.

Buzzard says that nearly all cases disclose syphilis, immediate or remote.

Fournier found a history of syphilis in 93 per cent. of his cases of tabes: Voigt, 81; Rumpf, 80; Spitzka, 80; Oehnhausen, 72; Chauvét, 71; Erb, 62; Webber, 54; Putnam, 49; Birdsall, 43; Berger, 43; Rockwell, 40; and Seguin, 22 —an average of 60 per cent.

Strümpell says that probably 90 per cent. of tabetics have had syphilis; and in order to reconcile this statement with the fact that the changes in the cord are different from those usually produced by syphilis, he is disposed to assume that

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the syphilitic infection produces a *chemical poison* having a special deleterious effect on certain fibres of the cord.

Spitzka regards syphilis as the most important *predisposing* cause, and the action of cold and wet on the lower segment of the body as the most important *single exciting* cause.

Renmont observed among 3,400 cases of syphilis that 1.17 per cent. had locomotor ataxia, and that 8.5 per cent. had some form of nervous disease; so it is reasonable to conclude that every man who has had syphilis has one chance in eighty-five of having tabes, and one chance in twelve of having some form of nervous disease.

It would seem that the lower animals are not exempt, Drummond having recently reported a case in a donkey—the diagnosis being confirmed by the necropsy.

Morbid Anatomy.—To the naked eye, the cord appears smaller and thinner than normally, and the pia mater may be thickened, opaque, and adherent to the posterior portion of the cord, which is gray and shrunken. The posterior gray cornua and nerve roots are sometimes atrophied. The process is most advanced in the lumbar cord involving the middle and posterior portions of the posterior columns, including Goll's column; in the dorsal cord, the posterior columns are almost completely degenerated; while, in the cervical cord, when affected, the columns of Goll are chiefly involved, together with the prolongation of fibres from the root zones of the lumbar cord and the lateral root areas in the columns of Burdach (Strümpell).

Spitzka believes the ataxia symptoms to be due to lesion of the columns of Goll, while Charcot, Pierret, and Hamilton hold that the disease may exist in typical form without any lesion of Goll's columns.

Pierret thinks that it is involvement of the posterior root zones, which produces the characteristic symptoms, but Strümpell cites two or three cases to disprove this. Neuritis of the peripheral nerves has been proved able to cause ataxia by Déjerine and others; but as Déjerine only found it present in 20 per cent. of cases, the ataxia in the other 80

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per cent. could not be accounted for in this way. So that it may be assumed that the exact location of the lesion, which is responsible for the ataxia, is not yet known.

With the microscope, the nervous tissue is found more or less destroyed, and partially replaced by neuralgia and débris, consisting of corpora amylacea, oil globules, rolls, of medullary sheaths, and naked axis cylinders.

The two sides of the cord are usually symmetrically involved, but a small part of the posterior columns adjoining the posterior gray commissure, as well as a little of the postero-external portion of these columns, and a small laurel-leaf-shaped portion, bisected by the posterior median fissure, are nearly always found free from disease.

Changes corresponding to those in the cord are frequently found in the optic nerves, in explanation of which Hamilton suggests the spinal root discovered by Stilling, passing from the external corpus geniculatum through the crus into the medulla. Degenerative changes have been found in the pneumogastric and sciatic nerves, and Déjerine has found multiple neuritis in 20 per cent. of his cases, to which he attributed the muscular atrophy so frequently seen in the extremities, and thought that the disease might originate this way—the changes in the cord being secondary to the multiple neuritis.

Peculiar changes are sometimes found in the osseous system—the nature of the changes being a fatty degeneration and diminution of phosphates, which most frequently affect the long bones, leading to atrophy and erosion of their extremities and predisposition to fracture.

Symptoms.—It is customary to divide the symptoms into three stages, but these pass so gradually into one another that no sharp line of demarcation can be drawn. The disease begins insidiously, and is often far advanced before the patient applies to the physician.

The earliest symptoms are a tired feeling in the knees and ankles after slight exertion, and pains in the lower extremities or in other parts, which vary in severity from the dull aching of rheumatism to the sharp neuralgic pains

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which shoot through various parts, especially along the distribution of the great sciatic and anterior crural nerves, producing sometimes, according to Spitzka, the most agonizing suffering which the human frame is ever compelled to endure. These are the fulgurating or lightning pains. Or there may be numbness of the toes and feet, or hands and fingers, especially in the course of the ulnar nerve; a girdle sensation around the body, which may ascend as the disease in the cord ascends; bladder troubles in the form of irritation or paresis; first increased sexual desire and ability, but later diminution, or even extinction; pains in the head; ptosis, strabismus, diplopia, dimness of vision or color blindness.

On testing, the patellar tendon reflex is almost invariably found absent, the cutaneous reflexes undergo no constant change; but there is usually reflex iridoplegia, or the Argyll-Robertson pupil—*i. e.*, inability of the pupil to react to light, or if so, in a very sluggish manner, although the reaction to accommodation may be normal. As a rule, there is myosis of both pupils, but there may be mydriasis; sometimes the pupil is oval, or its outline may be notched, or one may be more contracted than its fellow.

With the ophthalmoscope the optic disk is found atrophied and whiter than normal. In a few cases, the hearing is impaired from disease of the auditory nerve.

Among the rarer early symptoms, although they may occur in the later stages, are the different *crises* and Charcot's *arthropathies*.

The *crises* are disturbances of function of certain viscera, as stomach, intestines, heart, lungs, larynx, kidneys, bladder, and genital apparatus, characterized by suddenness in appearance, severity, and shortness in duration.

The *gastric crises* are the most important, as they are the most common. In the midst of apparent health, without cause, the patient is taken with extreme epigastric distress, violent pain, and incontrollable vomiting.

Sometimes cardiac and pulmonary *crises* are added. After lasting from a few hours to as many days, they disappear as

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suddenly as they came, to recur at regular or irregular periods. There is thought to be some connection between the fulgurating pains and the *crises*, as when the former cease the latter sometimes begin.

Charcot's *arthropathies*, first described by the distinguished French neurologist, consist in a peculiar swelling of the joints with great effusion and a remarkable absence of pain. The swelling may disappear without serious damage; or, on the contrary, it may continue until the extremities of the bones are atrophied or absorbed, resulting in dislocation and destruction of joints.

According to Charcot, these symptoms occur early in the disease, in 10 per cent. of cases, and the joints are affected in the following order of frequency: knee, shoulder, elbow, hip, and wrist—though the smaller joints may be affected.

Concomitant with the symptoms described or coming on later, perhaps after the others have lasted from a few months to twenty years, are the ataxic symptons. The patient has more difficulty than usual in finding his way around in the dark, or in going up or down stairs, especially the latter. There is a sensation as of standing on something soft, as cushions, wool, or a feather bed. On standing with the eyes closed, there is great oscillation and swaying: this is Romberg's symptom. The patient cannot walk backward, and while walking forward, if suddenly told to halt or about face, he sways violently, staggers, and sometimes falls. The gait is characteristic. There is no lack of power, but a want of control over the movements of the legs in walking—the feet being thrown out and brought suddenly to the ground, the heels striking first.

If the cervical part of the cord be affected, the upper extremities show corresponding symptoms, the finer movements of the hands being lost. If told to touch the nose or any part of the face with one finger, the eyes being closed, it will be found impossible, or at least it can only be done after repeated trial.

The electrical reactions are normal according to Strümpell,

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but Spitzka and others have found increased irritability in the initial period.

Delayed sensation is common. Thus, if the patient's foot be pricked with a pin, he immediately feels it as a *common sensation*, but a few seconds may elapse before any *painful sensation* is felt. The muscular sense is also frequently impaired, so that the patient cannot estimate weights.

As the disease advances and the ataxia grows worse, progression may become impossible, the patient straddling, stumbling and tripping himself. The vesical symptoms become worse and the rectum may also be affected.

Besides the crises and arthropathies already mentioned, other trophic troubles arise; such as various eruptions of the skin, perforating ulcer of the foot, or muscular atrophy of the extremities.—the cause being peripheral neuritis, according to Déjerine and Bastian. Absorption of the alveolar processes may take place with loss of teeth. Luys and J. Hoffman have reported cases.

There may be fractures of bones from trivial causes. Verneuil collected thirty-eight cases of fracture in tabetics, in seventeen of which the femur was broken; in ten, the bones of the leg; in six, the bones of the forearm; and in three, the clavicle. In nearly 50 per cent of such cases the fractures are multiple, from two to eight bones being broken at the same time. Such fractures unite readily. There are usually exacerbations, in which, for a time, the patient seems to be much worse, sometimes followed by a period of improvement in which the disease seems to be arrested; or the disease advances steadily, though slowly, and the patient becomes bed-ridden from ataxia, paralysis, bed sores, cystitis and pyelitis; unless, as often happens, he be taken off by some intercurrent affection—the most common being phthisis. Cerebral hæmorrhage or embolism may occur, with hemiplegia. The lateral columns may be invaded, producing lateral sclerosis, or if the cerebrum suffer, general paralysis of the insane may result. Progressive muscular atrophy is a not uncommon complication.

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Diagnosis.—The only difficulty in making the diagnosis is in the early stages.

"If lancinating pains, absence of patellar tendon reflex and iridoplegia exist, the diagnosis is absolutely certain"—so says Strümpell.

Friedreich's, or the family form of tabes, may be known by the youth of the patients, 12 to 18 years of age. Females are more often affected by the history of heredity, by several in a family being affected, and later on by disturbance of speech, nystagmus, and tremor of head and trunk, and by the absence of static ataxia. Disseminated sclerosis is recognized by the "intention tremor" and exaggerated reflexes.

In *cerebellar* disease, the swaying is greater and not so jerky; closing the eyes does not increase it, and vomiting and vertigo are more apt to exist.

In *chronic myelitis*, there is paresis or paralysis, more trouble with the rectum and bladder, sometimes involuntary evacuations, and greater tendency to bed sores.

Multiple neuritis, *Landry's paralysis*, or *beriberi*, is characterized by more acuteness of invasion, pain and tenderness along the nerves of the extremities, and the absence of pupillary symptoms.

Syringo-myelia may be differentiated by its usually affecting the upper extremities, often one at a time, and by the dissociation of sensation—that is, the sense of distinguishing different degrees of temperature, or of feeling pain may be lost while the muscular and tactile senses are retained. If the disease begins with gastric crises or arthropathies, care should be taken not to mistake it for organic disease of the stomach or rheumatism.

Prognosis.—As regards early death, the prognosis is good, but as regards recovery or restoration to health, as bad as it can be. The disease may be arrested, but restoration of lost functions is extremely rare. A certain degree of absorption of the sclerosed tissue may take place, allowing the axis cylinders which have survived to resume their functions.

Strümpell says that recovery occurs "very rarely, if at all."

Hamilton says there are not many well authenticated

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cures, and that they are cases of hysteria; but admits that there may be periods of arrest or improvement, and refers to two cases he thought that he had cured, but in three or four years he was convinced of his error.

L. C. Gray has said that he did not believe there was a cure on record.

Ross says: "A certain small percentage end in recovery."

Spitzka says: "An arrest of the disease is possible, but restitution of destroyed nerve elements impossible."

Treatment: As is usual when there is no specific, a host of remedies have been used in this disease. The most important are nitrate of silver, mercury, iodide of potassium, ergot, phosphorus and chloride of gold and sodium. Electricity is sometimes of benefit; and mud and warm water baths are recommended.

A warm climate should be selected—not only on account of the liability to phthsis, but because the disease is more favorably influenced. Nerve stretching, so highly recommended by Langenbüch, is obsolescent. Within the last two years, the suspension treatment has come into vogue, and has been given extensive trial. It seems that J. K. Mitchell used suspension in 1829, for affections of the cord, secondary to vertebral disease, and was followed by his son, S. Weir Mitchell, but neither appears to have used it for locomotor ataxia.

In 1882, J. Von Motschutkowsky, of Odessa, Russia, after suspending a patient with spinal curvature for the purpose of putting on a Sayre's jacket, noticed improvement in certain symptoms. This led him to make a series of experiments, in which he treated fifteen cases of tabes by suspension, thirteen of which improved, having less pain, less ataxia, diminished paræsthesiæ, and better muscular power. The following year he published the result of his experiments, but little was heard of it for five years; when in 1888, F. Raymond, travelling in Russia, learned the method from Motschutkowsky, and on his return to Paris called Charcot's attention to it. Endorsement of the method by the eminent French scientist in January, 1889, was sufficient

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to guarantee its trial throughout the medical world. The apparatus for suspension is well known. A spring balance, drawing 130 pounds, should be attached between the collar and the rope which is to draw on the collar, so that the exact number of pounds of traction made on the spine may be known. The exercises may be repeated every second or third day. The first trial should not exceed thirty seconds in duration, to be increased thirty seconds at each subsequent trial, and not more than forty pounds traction should be made at first, to be increased twenty pounds each time, possibly up to 128 pounds.

The time of suspension may be extended to five or ten minutes—every ten seconds the rope which stretches the spine being drawn to give the maximum traction, and then quickly but steadily relaxed.

It has been suggested that suspension by the arms is not essential, and that the spine can be sufficiently stretched by traction on the collar while the patient is seated.

Motschutkowsky thinks the improvement is due to stretching of spinal nerve roots, which undoubtedly occurs. Althaus thinks it is owing (1) to breaking up of adhesions between the membranes and cord; (2) by loosening and breaking up of hardened neuroglia—in each case relieving the axis cylinders from pressure, and allowing a freer transmission of nerve force, and (3) by a special action on the vaso-motor and cardiac centres in the medulla oblongata.

Birdsall has collected 340 cases of tabes treated by suspension. Improvement was claimed in 70 per cent., no improvement in 30 per cent., and in 6 per cent. the symptoms were aggravated. No cures were reported.

Nearly all speak favorably of the method, though Erb had bad results. Of six cases treated, two were slightly improved, three made worse, and one died four days after cessation of treatment from paralysis of the vagus nerve.

Erb's cases were in the early stage of the disease, which is a contra-indication to suspension. Other contra-indications are cardiac trouble, anæmia, œdema, phthisis, emphysema and obesity. Five fatal cases have been reported from

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this treatment. The improvement was in gait, ataxia, vesical symptoms, fulgurating pains, and sexual function—occasionally in the eye symptoms, and sometimes the knee-jerk returned. Some of the bad effects were vertigo, syncope, amaurosis and albuminuria.

In preparing this article, I must acknowledge my indebtedness to the following books and periodicals: Strümpell's Practice of Medicine; Charcot's Nervous Diseases; Hamilton's Nervous Diseases; Ross' Nervous Diseases; Bastian's Paralysis, Cerebral, Spinal and Bulbar; Spitzka's Monograph in Pepper's System of Medicine; Annuals of the Universal Medical Sciences for 1889 and 1890; and various numbers of the Medical News and of the Journal of the American Medical Association.

ART. IV.—**Simple Ulceration of the Rectum.***

By LOUIS C. BOSHER, M. D., of Richmond, Va.

PROFESSOR OF ANATOMY, MEDICAL COLLEGE OF VIRGINIA.

I have selected this subject, not with the intention of writing a lengthy paper, but simply to report a very interesting and troublesome case of this disease that fell into my hands last year.

In October last, I was called to see a young married lady, who was suffering intensely from a persistent diarrhœa and nervous prostration. She had become very much emaciated, and was very anæmic. I learned that she had been a sufferer for eight or ten months from diarrhœa, and during that time had lost some forty or fifty pounds in weight. She told me that she had received treatment from a number of physicians—one of whom informed her that she had a chronic diarrhœa, and was beyond the control of medicine; and another, that she had consumption of the bowels, and intimated that it was only a question of time.

When I saw her, she had just returned from one of our Alum Springs, where she had been constantly under the

* Read before the Richmond Academy of Medicine and Surgery, September 9th, 1890.

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care of a physician. To complicate matters, a pelvic abscess had formed during her stay at the Springs, and broke before she reached home. Under this double drain on her system, she wasted to almost a skeleton, and became completely bed-ridden. The abscess discharged quite freely per vaginam, but finally, under active treatment, ceased, with an improvement in her general health. The diarrhœa, however, continued, off and on, notwithstanding the free use of remedies prescribed for this trouble. The patient now began to complain of a slight protrusion, and of a smarting, with an unsatisfied feeling whenever she went to stool. She also complained of a dull aching pain at the end of the backbone. After the development of the above symptoms, I made an examination of the rectum with a rectal speculum. When the sphincter was slightly dilated, there was a slight discharge of pus and mucus from the bowel. On removing the blades of the speculum, I discovered an ulcer, about an inch and a half in diameter, occupying the anterior wall of the rectum, just above the internal sphincter. The speculum was then removed, and by inserting the finger into the vagina, the bowel was turned outwards, bringing the ulcer fully into view. After cocainizing the ulcer, and slightly scraping it, I made an application of nitrate of silver.

When I saw the patient on the following day, I was informed that the dull pain in the lower end of the backbone was very much improved, and that there had been only one movement from the bowels in twenty-four hours, and that this one was unaccompanied with the usual rectal tenesmus.

Previous to the discovery of the ulcer, and the application of nitrate of silver to the same, there had been from three to six movements in twenty-four hours. This treatment was repeated at intervals of five or six days for some little time before the ulcer healed.

The diarrhœa has now been absent for some six or eight months; and although she is very emaciated and anæmic, she is doing very nicely and is enjoying a stay in the mountains.

I have reported this case for two reasons: Firstly, to emphasize the importance of diarrhœa as a persistent symptom in some forms of rectal ulcer. Secondly, to call attention to the long train of nervous symptoms which followed its presence, and which, with the diarrhœa, were entirely relieved by a removal of the cause.

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During her confinement to bed, this patient was the subject of constant attacks of hysteria. She is now comparatively free from all hysterical symptoms.

Dr. Allingham, in his work on the Rectum, says: "Ulceration of the rectum is not an uncommon disease; it inflicts great misery upon the patient; and, if neglected, leads to conditions quite incurable. As the earlier manifestations are fairly amenable to treatment, it is of the utmost importance that the disease should be recognized early. Unfortunately, it rarely is so; the symptoms are obscure and insidious; the suffering at first but slight; and thus the patient deceives, not only himself, but his medical attendant."

Now, what are symptoms of this affection, and what are the causes producing it?

Diarrhœa is an early symptom, occurring early in the morning, frequently as soon as the patient gets out of bed. There is a most urgent desire, with an unsatisfied feeling, requiring the patient to remain long at stool. A dull, aching pain, located at the end of the backbone, is another prominent symptom. Blood, sometimes mixed with pus and mucus, often escapes from the rectum. When the ulcer is complicated with a fissure in the anus, the most intense suffering, often lasting for hours, will occur, especially after stool. Pruritus ani, caused by the ichorous discharge from the ulcer, is another very annoying symptom. So blood-poisoning of the different organs of the body may occur when the ulcer has begun to break down, and in its destruction of tissue, pus, mucus, and impure blood, are excreted.

Prominent among the causes of rectal ulceration is catarrh of the rectum or proctitis, which may be brought on by exposure to cold, sitting on cold surfaces, etc. Also the lodgment in the bowel of fish or chicken bones, fruit-stones, buttons, seeds, pins, etc., which have been accidentally swallowed, may set up severe forms of ulceration.

Operations for hæmorrhoids and accidents in child-birth, too, may be numbered as among the causes. Constipation, the hardened fæcal masses tearing the delicate mucous mem-

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brane of the rectum, is not an infrequent cause of ulceration.

In the last edition of Kelsey on Diseases of the Rectum and Anus, he says: "It is much easier to give a lady a diarrhœa mixture, and trust in Providence for a cure, than to gain her consent to take ether and be thoroughly examined; and for this reason, many a case of curable disease has been allowed to reach an incurable stage before its existence has been certainly determined. The existence of a chronic diarrhœa, or of a discharge of any kind from the rectum, is always a good and sufficient reason for a thorough physical examination; and, with ether, a dilated sphincter, and a good speculum, no one need be in doubt as to the existence of ulceration in the lower part of the rectum."

Would it not, then, be well in chronic forms of diarrhœa failing to be relieved by the usually recognized treatment, to make an examination of the rectum with a speculum, and exclude rectal ulceration before pronouncing our patients the subjects of incurable forms of diarrhœa?

Art. V.—Catarrhal Otitis Media—Aural Catarrh.

By LAURENCE TURNBULL, M. D., P. H. G., of Philadelphia, Pa.,

Aural Surgeon Jefferson Medical College Hospital, Philadelphia; President of the Sub-Section of Otology of the British Medical Association at its Meeting at Cork, Ireland; Chairman of the Section of Ophthalmology and Otology of the American Medical Association of New York; Member Appointed for the Organization of the Otological Congress, at Florence, 1892, Etc.

This affection of the ear is exceedingly common, more especially in the East and Northwest, and is found all over the United States.

If treated in the early stage by an intelligent physician, it is very amenable to treatment, but when it becomes chronic, or is improperly treated, but little can be done for the disease. Still, it is important to prevent the increasing deafness, so that this is not profound.

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The sequelæ to which we have to attend are the increasing adhesion and the narrowing of the Eustachian tube involving alterations in the mucous membrane, termed sclerosis, and the reflex influence upon the internal ear, involving the labyrinth, semi-circular canals, and cochlea.

We are constantly receiving letters from patients in all parts of the country on this subject, but we rarely receive so intelligent a history as the one which we place before our readers, suppressing, as we always do, names, localities, etc. We have given our diagnosis, prognosis and treatment for the benefit of physicians who have just such cases. We hope it will benefit those who are disposed to be taken in by the vendors of the various so-called ear drums.

In most instances, the most of these so-called hearing restorers act most injuriously upon the delicate and sensitive ear, and are of no benefit except to those having a hole or perforation of the drum membrane, or from relaxation of the small bones of the ear, which become sometimes separated from the membrana tympanii, or membrane of the drum.

No matter how intelligent the patients may be, in their hopeless condition they are glad to grasp at a straw, if the individual (he need not be a physician) selling these things states positively he can cure the deaf, and has numerous names on his printed list of cures. These are in the majority myths, and cannot be found when hunted up by the more careful patient.

The writer has in his possession a box of these various injurious agents, which have been given to him by patients who have not received the smallest amount of benefit.

In several instances they have acted as a foreign body in the ear, and when there is a metal stem, as is often the case, whether of iron, brass, gold or silver, they are sure to set up a discharge, termed a running ear.

The only form of artificial covering to the diseased perforation of the drum membrane should be a delicate gauze or rubber, charged with an antiseptic solution made and

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applied as I have before recommended and published,* to protect the ear from the floating microbes in the air, and from changes of temperature in the atmosphere. It should always be the duty of the aural surgeon to save this delicate membrana tympani, which represents the string of the violin and other instruments of the same class. The tendency of the ear surgeon of the present day, we are sorry to say, is to destroy the ear, tear out the membrane and bones of the ear to relieve certain noises, or check a discharge from the ear of long duration, leaving the patient deafer than before, and running the risk of death, for in many instances the dead bone is not the only cause, often it is inside the skull or brain. A patient's life is shortened, which might be prolonged for many years to the comfort, or absolute necessity of his family depending upon it.

We will now proceed to give the case of one of these individuals who was tempted to try these artificial aids.

"I will now proceed to state my case as near the directions given in your work as I can.

I am 23 years of age; my occupation has been mostly farm work. My general health has been good until last spring (1889), when I had an attack of lung fever, from which I recovered after several weeks of illness. This in no way affected my deafness. I am of a vital motive temperament; my pulse is somewhat irregular at times. I have no deaf relations but my mother, who became quite deaf at the age of 42. She was of a very nervous temperament, which I have inherited to some extent. Do not know what caused her deafness, unless it was a change of climate, we having come west twelve years ago. We formerly lived in the east. My mother died of liver disease, nine years ago.

"During the winter of 1880, I being then 14 years of age, took a severe cold which seemed to settle in my head. On waking up one morning, I was surprised to scarcely hear a word or sound. This condition lasted for two weeks, when the deafness as suddenly disappeared and my hearing was normal again, but it left me with a very bad catarrh of the head. The following winter I noticed a slight defect in the left ear, by testing with a watch. It gradually became

* Virginia Medical Monthly, 1889.

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worse for several years, but it was not until some four years ago that my right ear became affected, and then it required a raised voice for conversation. I have never had a discharge from my ears, and I think the cause of my deafness is aural catarrh with labyrinthine deafness. But I am also inclined to believe that the nerve is affected. The former symptoms were dizziness; a dull, heavy pressure behind and above the ear; a copious discharge from both nostrils; head all stopped up; and upon arising in the morning, my ears would seem swollen shut, and it was not until I had been at work an hour or so that they would open with a click. When I become fatigued, I always have pain in the mastoid process and internal ear My deafness has increased by imperceptible degrees. The present symptoms are a continual roaring sound, accompanied by a noise which I can only liken unto a hammer, when struck upon an anvil. I can at times produce this noise at will, by simply tossing my head about when lying down. I think there are bands of adhesion, judging from the sensations produced when the tympanum is inflated. I can hear a loud ticking watch, only when in contact with my right ear, and for conversation I am required to be spoken to in a loud and distinct voice at a distance of two yards. My left ear is the worst. The aggravating causes are cold, moist weather; bodily fatigue and mental excitement; can hear best in dry and cold weather, and when I am feeling otherwise well. My hearing is very much subject to the changes of the weather. I can hear a large tuning fork if placed upon my head, or on the mastoid process. My own voice sounds very loud to me, and has a peculiar resonance at times, especially when I have a cold. I do not know the exact state of my tympanic membranes; one doctor said there were two small perforations in the left one, and I think they are both somewhat thickened and less concave than natural. The cerumen is somewhat darker than natural, but comes away in scales. When I practice Valsalva's method, the air goes in my right with a rush, but it requires the catheter to inflate the left. The mucous membrane of the pharynx is much inflamed, caused, I think, by catarrh. Tonsils are slightly enlarged. I think I am troubled with general debility, having worked very hard since a boy. I have been under the treatment of four different doctors for my hearing. They all claimed my deafness was caused by catarrh, and that they could cure me, except a doctor from Chicago; he said it was labyrinthine deafness. The first one treated me with Politzer's

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air-bag; applied tincture iodine to my tonsils, and advised me to use a nasal douche, but did not give me the necessary precaution of holding it too high, which was very injurious. The next one treated me altogether with constitutional remedies. No. 3 treated by inhalation of vapor and internal treatment, but did not give me any local treatment. No. 4's treatment consisted of all local. The air douche and catheter for the ear, powdered boracic acid for the throat and nostrils, with an astringent gargle. I became very much discouraged with their failures, and longed to know something of the ear myself, so I procured one of your books, and compared my own with the many cases given therein. After a careful study I concluded to try and treat myself. So I procured some of the instruments necessary, and started. I began by using Politzer's air-bag, once a day, for a week. By this, I succeeded in opening the right Eustachian tube so that the air would pass freely to the tympanum. As I could pass no air to the left one, I introduced the catheter, but at first did not succeed in passing any air, but after a day or two it entered the middle ear, though rather sluggishly. I then charged the air douche with iodine vapor. This seemed to relax the tubes very much, and also relieved me of the pressure around the ear. I subsequently used dry iodine, on account of it being cold weather. To my throat I applied the following: boracic acid, ℈iij; aqua rosar., f℥iv. This I think cured my catarrh as it has never troubled me since. I also used it through the nostrils with an atomizer. I also got a small McIntosh battery and used the weakest possible current. It is a Faradaic battery, and I felt sound and sensation the first time I used it. I applied one electrode to the meatus, which was filled with warm water, and the alternate one in the opposite hand. I used this three times a week for eight minutes at a time. I continued this for about six weeks and then stopped to see what the effects would be. In about two weeks I noticed a marked improvement in hearing, the dizziness left me, and the tinnitus aurium was broken from a continual roar to an occasional spell of noise of a higher pitch. I was very much encouraged by these results. This led me to believe that there was hope for still further success. So I continued the same treatment for five weeks longer, but did not notice any further improvement, and during the late heated term I noted a slight increase in deafness. I should add that I used in connection with the foregoing, the treatment given on page 496 of your

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work, for labyrinthine deafness. As I used such a combination, I cannot say which caused the improvement.

"I have during the last five years been nearly overcome by the heat on several occasions, and this leads me to believe that my brain may be involved in the deafness. I notice, when spoken to, that several seconds pass from the time the words were spoken before I know what was said. I will state here that I have a tendency to stagger when I am walking in the dark. I tried a pair of Wale's artificial ear drums, some years ago, but they did me no good, and about a year ago I got one of Dr. Blodgett's multi audiphones. This seems to be too powerful, as it brings every sound to me in such a confused manner it is useless for me. I have been very careful in my treatment, never exceeding that given in your valuable work.

I hope the foregoing will give you an idea as to the cause of my deafness, and enable you to form an opinion as to the chance of any success in treatment. I know from the nature of your work that you will give me an honest opinion, and I have the greatest confidence in your ability. As this is my first attempt in writing anything of this nature, you will please overlook all mistakes, and I hope they will in no way hinder you in perusal."

My reply was as follows:

August 11th, 1890.

Dear Sir:—Have received your well written account of your case, and have read it with care.

There are several matters of great importance which will handicap your case as far as a favorable prognosis is concerned. The first is, that it is one of "hereditary deafness." Second, it shows sequelæ of acute inflammation of the middle ear. Third, it is progressive deafness, with but slight improvement by treatment. Fourth, you have had several symptoms of "Meniere's disease," involving the labyrinth, semi-circular canals, cochlea and auditory nerves. Fifth, from the narrowing of the Eustachian tubes, and adhesions to the promontory; the tympanic membranes cannot be otherwise than sunken, thickened and opaque, but not perforated.

Your habits have caused debility of your nervous system, and your out-door exposure to all kinds of weather helps to increase your deafness.

Now as to treatment: Your own course, aided by our work, has been most judicious and successful to a certain degree. The additional treatment that I would advise will be as follows:

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First. Massage to the ears, by drawing the ear upwards and backwards, and compressing the tragus into the orifice of the meatus back and forward. If the auditory canal is dry, drop in a few drops of a ten per cent. solution of menthol in fluid cosmoline, so as to produce a certain amount of suction. Make massage once a day for five minutes. The following additional local applications are to be employed. You may add the vapor of pure ether to your Politzer bag, inflating the ears every few days when you feel very deaf. If however, you should find inflation to increase your deafness, fit a piece of rubber tube with a piece of smooth ivory, and after anointing it with the menthol solution, introduce it into the meatus air-tight, fitting the other end into a syringe, so you can take it out when renewing the air, thus exhausting the air in contact with the drum membrane, bringing it up to its natural position and break up the adhesions. This must be done with great care, so as not to give pain or tear the membrane. Continue this treatment for three weeks or a month, then alternate with the former treatment and local applications of iodine, glycerin, etc.

Second. For your nervous debility, you must take a teaspoonful of an Elixir of Valerianate of Strychnia.* Your diet should be milk scalded, and drank warm three times a day, eating bread, potatoes, and fruit, with very little meat, and that only once a day. If the liver should get out of order, take two tablets of calomel and bicarb soda (of each 1.20 of a grain) at bed-time, and one teaspoonful of sulphate of magnesia, oak orchard or sprudel salts in the morning in half a tumbler of water. Avoid the use of all stimulants—also coffee, tea, and above all, tobacco.

Third. *Hygienic Rules.*—Live in an elevated region—near no marsh or damp ground. House to be dry, with a dry cellar. Employ woolen underwear, summer and winter, only being light in summer and heavy in winter. Avoid draught in the ear, and carry a small piece of wool in the pocket, so as to use it in ears when driving, etc. Always wear the same kind of shoes and stockings; never use slippers, as a chill to the feet has an damaging influence on the deafness. Use a tepid bath once a week, wetting the upper part of your head and neck, but let no water, cold or hot, get into your ears. Do not ever dip your head in water. Report in a month."

1502 *Walnut Street.*

* Prepared by Mr. Morgan, 1629 Walnut street, Philadelphia, Pa.

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Art. VI.—The Diagnosis, Pathology and Treatment of Chronic Cystitis in the Male.

By HUGH BLAIR, of Richmond, Va.

Anatomical Memoranda.—The bladder is a musculo-membranous sac. Some say it has three coats. Gray says it has four. The external coat is derived from the peritoneum. It does not cover the whole bladder; if it did, suprapubic cystotomy would not be so much in vogue. It extends over the posterior portion from the opening of the ureters to, and a little beyond, the summit and over, and about one-third of the lateral portion. Next comes the muscular coat with its two layers of fibres, external longitudinal, and internal circular, both non-striated. The muscular coat is connected by a cellular coat to the mucous coat. The mucous coat is smooth, pale and loosely adherent, except over the trigone, where it is closely adherent and never in folds. Some few mucous follicles are found in the fundus and neck. Near the neck numerous small glands of the racemose variety appear.

The arteries that supply the bladder come from the anterior trunk of the internal iliac, and the veins terminate in the internal iliac vein. The blood vessels are distributed ultimately to the mucous membrane. The neck, sides and base of the bladder are the most vascular parts.

Some say that there are no lymphatics in the walls of the bladder. Gray says that the lymphatics accompany the blood vessels. The mucous membrane is a poor absorbing surface.

The nerves that supply the upper part of the bladder are derived from the hypogastric plexus, and the nerves that supply the neck and base come from the sacral plexus.

General Remarks.—Inflammation of the bladder generally begins with trouble in the mucous coat, and may, more or less speedily, extend to the muscular, and then to the peritoneal coats. Occasionally the trouble begins outside the bladder, and extends to it from the adjacent parts, and then the peritoneal or muscular coats are first affected. But the

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cystitis that affects the male, and is usually seen in practice, always begins with irritation or inflammation, more or less severe, of the mucous coat, which is the most delicate and most susceptible of disease.

This is the usual sequence, according to the degree of inflammation: 1st, increase of secretion; 2d, puriform change; 3d, plastic exudation; and lastly, gangrene.

Frequent and ineffectual efforts at micturition thicken the muscular coat, and give rise to trabeculæ, between which the mucous membrane may be forced into pouches, in which pouches calculi may lie concealed. In consequence of inflammation, the bladder may become indurated and contracted. It is the neck of the bladder and neighboring parts, that are usually the first and chief sufferers in cystitis.

Cause.—Inflammation of the bladder may be caused by wounds; by the presence of calculi, or incrustations deposited from the urine; by lithotrity or lithotomy; by gout, or any disease accompanied by morbid urine; by the introduction of catheter or any foreign body; by gonorrhœa; by stricture; by enlarged prostate; by any obstruction to the natural outflow of the urine; by paraplegia, and other forms of paralysis; by the use of cantharides, turpentine, or other drugs which have a specific irritating effect on the bladder. Constitutional conditions, such as tuberculosis, and also neoplasms, ought not to be excluded in the enumeration of the causes of cystitis.

Diagnosis.—Cystitis is characterized by great irritability of the bladder, indicated by frequent, sometimes constant, desire to urinate; by painful micturition; by the passage of urine in small quantity; by the character of the urine, which at first may be simply acid with increased quantity of mucus, then alkaline with muco-pus, containing triple phosphates and amorphous phosphate of lime; by pain and tenderness in, and extending from the vesical region; by pyrexia accompanied by uneasiness, and sometimes by severe suffering located in the vesical and urethral anatomy.

Alkaline urine and triple phosphates belong to chronic cystitis; but all the foregoing symptoms may appear at

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any stage during the course of cystitis, for acute cystitis is usually the precursor of chronic cystitis, and acute cystitis may, and often does, supervene after the chronic form has been established.

Cystospasmus.—It is frequently necessary to differentiate spasm of the bladder from cystitis. This is easily done when we reflect that spasm of the bladder is not an inflammatory affection, but belongs to the neuroses. Consequently the mucus, pus, and deposits which are found in the urine of cystitis are absent. Nor is there fever or local tenderness.

What is Chronic Cystitis?—The books say that when the violence of acute cystitis has spent its force, the complaint passes into that milder form called catarrh of the bladder. The title to the chapter on chronic cystitis in one of our most celebrated publications reads thus: "Vesical Catarrh—Chronic Inflammation of the Bladder."

Any fluid discharge, the result of irritation or inflammation, from a mucous membrane is a catarrh. There is an asthenic form of chronic cystitis, accompanied by mucopurulent discharge, which presents the symptoms of the acute form in a moderate degree, and may continue sluggishly for a long time. This is vesical catarrh, but how inadequate is the term to describe those severe lesions of the bladder which have often baffled the best skill of the best pratitioner, and tortured his patient to death. The pathological history of chronic cystitis includes among its lesions, thickening and contraction of the whole organ; ulceration, even to the destruction of the entire mucous membrane; abscessof the muscular walls; abscess immediately outside the bladder; peritonitis; gangrene; pyrexia, and the typhoid condition. These are the possibilities and the actualities of chronic cystitis.

Cause of the Chronic Form.— The causes of *acute* cystitis, which have been enumerated, are all of them causes of chronic cystitis. The bladder was designed to hold fluid, and it cannot, without injury, endure the presence of any solid body. Calculi and calculous deposits in

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the bladder are a long-time recognized cause of chronic cystitis. Bacteria introduced from without, are a cause of chronic cystitis; indeed, they are an element of the greatest importance, both in the inception and progress of the disease.

As this is not the place to argue the proposition, it might be imprudent to say that as there is no coral island without the polyp, so there is no chronic cystitis without bacteria.

Of all the causes that give rise to the disease in the most intractable form, those that obstruct the outward flow of the urine are the worst. For this reason, stricture and enlarged prostate have been the cause of the greatest number and the most aggravated cases of chronic cystitis. When these lesions reach a certain stage, they necessarily obstruct the discharge of the urine; instrumentation becomes necessary; inflammation follows—it may be slight at first, but often increases with the increased use of the instrument, and the obstruction is obviated with more and more difficulty. The consequence of retention is decomposition of the urine, due to bacteria, and the formation of morbid substances, which are constantly present to produce vesical irritation and inflammation. From this beginning may proceed all that disturbance of function and change of tissue which affect the bladder under the name of chronic cystitis.

Diagnosis.—The symptoms of acute cystitis have already been given. If we read the books, we will conclude that cystitis may be diagnosed by the same symptoms in a less active form—asthenic form. As we have said, the symptoms of acute cystitis may supervene at any time during the progress of the disease. During the course of the disease there are degrees and accidents of which urinary analysis affords valuable information. The character of the urine varies with the progress of the disease.

A short summary of the condition of the urine—First stage.—The urine that characterizes the first stage is cloudy; normal in amount and specific gravity; acid when passed, soon becoming alkaline; no albumen, unless there is kidney complication, because there is no pus. The cloudiness is due to

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the presence of mucous corpuscles, bladder epithelium and bacteria.

Second stage.—Turbid; amount normal; specific gravity normal; alkaline when passed, because some of the urea has been changed into carbonate of ammonia; as much albumen as is represented by the pus. The sediment consists of muco-pus, triple phosphates, amorphous phosphates, epithelium and bacteria.

Third stage.—Very alkaline; very bad odor; specific gravity not so high; albumen; carbonate of ammonia; sulphide ammonia; and a sediment consisting of pus; some blood corpuscles; very much bacteria; phosphates and the detritus of molecular change in the tissues. So important a part does alkaline urine play in chronic cystitis, that some remarks on the subject may be essential at this place. Alkaline urine is a toxic. Normal urine is acid. The neutralizing power of thirty grains of oxalic acid represents the physiological acidity of the urine passed in twenty-four hours. The bladder was designed as the receptacle of a mildly acid fluid. When carbonate of ammonia is found in the urine, it is the result of decomposition in the urea. Urea does not decompose into carbonate of ammonia in the bladder, or out of the bladder, until brought into contact with the ammoniacal ferment; nor does this decomposition take place when the ferment is introduced into the bladder, if the mucous membrane is in health. The name "Micrococcus Ureæ" has been bestowed on this ferment. Alkalinity of the urine may be due to soda, potash, or the alkaline phosphates, and the presence of these may be conducive to the change of urea, *but after all, it is the ammoniacal urine that is so pernicious.* This it is which accompanies, or is the result of, or more probably the cause of the grave lesions which make the human bladder, and also their connecting channels, a source of misery to their possessor.

Ammoniacal urine acts as an irritant on the mucous membrane of the bladder, exciting a form of inflammatory action, which is followed by the secretion of a large quantity of mucus, of a viscid character. By the persistence of

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the irritation, puriform mucus is at length poured out, and this is changed by the carbonate of ammonia into a viscid, almost gelatinous mass, sometimes so tenacious as to form long tough ropes of matter, capable of being drawn out several inches without breaking. Dr. Dickinson (*Renal and Urinary Affections*) says: "Looking first at the urine as directly connected with the origin of the disease, it appears that three conditions usually concur—retention, ammoniacal decomposition, and admixture with products of mucous inflammation. Of these, the essential circumstance appears to be ammoniacal decomposition, which retention may induce, and cystitis either precede or follow."

Speaking of the kidney, he says—and the same is true of the bladder:

"The simple presence of pus or mucus in the urine, though lasting for years, does not appear to set up renal disorder, so long as the urine retains its acidity and resists putrefaction. I have myself known no instance in which the mischief has arisen except in connection with ammoniacal urine. The ammoniacal change, however, although it may arise independently of mucous inflammation, produces it so constantly that the origin of the disease is always thus complicated."

This ammoniacal decomposition of the urine is accompanied with abundant prisms of triple phosphates and amorphous phosphates, leaving an incrustation on the urinary surface. Dr. Lionel Beale (*Urinary and Renal Disorders*), says:

"This process not infrequently results in complete disorganization of the mucous tract, and generally leads to a serious state of things. Not uncommonly, portions of the deposit become detached, and receiving earthy deposits upon their surface, layer after layer, concretions of a soft, very brittle character, but not unfrequently of considerable size, may be formed."

Ammoniacal urine is not only a direct irritant to the bladder, and a constant aggravation to its lesions, but is a source or vehicle of morbific products—leucomains—which may beget constitutional conditions of a typhoid nature, and consummate an end to life.

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Those troubles of the bladder, which arise from atony, or from lesions of the brain or spine, partake, according to the circumstances, of the nature of cystitis, as it has been described. The chief features are muscular inability of the bladder to empty itself, and consequent distention and retention, and also a relaxation of the sphincta vesicæ, so that there is a constant dribbling away of the urine. Other symptoms of chronic cystitis, especially those caused by ammoniacal decomposition, may supervene.

Prognosis.—There are cases of chronic cystitis that are utterly intractable, and after lingering for months or years, wear out the patient. Others suddenly assume the typhoid condition, and succumb. Many are subjects of the disease for years, manage to work at intervals, get better, and finally recover a tolerable condition of general health and local soundness. The old and feeble are less apt to be relieved.

In general, the disease is medicable, and the majority of patients are restored to health.

The prognosis is favorable in cases not complicated with enlarged prostate, incurable stricture, or paralysis.

Surgical kidney is one of the gravest consequences of cystitis, and for this reason it ought to receive special attention. As a rule, it is fatal. A celebrated authority says, "that it constitutes the most frequent termination of all urinary cases." Another says, "that of all renal disorders, next to the varieties of albuminaria, this is the most destructive to life. It may almost be said to form the natural termination of stricture of the urethra, and is the special danger which attends the use of the catheter and lithotrite." —(Dickinson.)

Surgical kidney is characterized by the presence of abscesses scattered through the renal structure, and these abscesses are associated with abundance of micrococci, disseminated and in colonies. Many of the tubules are crowded with the micrococci. These micrococci are the cause of surgical kidney. They reach the kidney by extension from the diseased bladder. The name surgical kidney was adopted by distinguished surgeons in 1873, in consequence of the

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death of the Emperor Louis Napoleon, who died of that disease after lithotrity. Before that event, Mr. Erichson had well described the disease. In treating of cystitis, he says (*The Science and Art of Surgery*): "This chronic form of inflammation of the bladder is not infrequently fatal, death resulting eventually with symptoms of a typhoid character; the tongue becoming brown, and the pulse feeble, and these are usually associated with urinary poisoning of the blood, the mental manifestations becoming dull and obscured, and the body emitting a strongly urinous odor, and the skin a dense clammy sweat."

Let it be emphasized that surgical kidney never arises unless there is ammoniacal urine. Green, the pathologist, does not think so; Dickinson does. He says (*Op. Supra Cit.*): "I have myself known no instance in which the mischief has arisen except in connection with ammoniacal urine. The urine was fœtid, and more or less mixed with vesical products, pus, mucus, and blood. There is reason to believe it was invariably ammoniacal. Acidity of the urine is fatal or unfriendly to the micrococci."

TREATMENT—Chronic cystitis is a disease of local irritation, connected with lesions of the bladder and constitutional debility. The indications are—1st. To remove the cause—calculi must be removed, stricture relieved, enlarged prostate medicated as far as possible. The tissues must be treated by such applications as tend to reduce inflammation, soothe, heal, and give tone. Especial attention must be given to the urine to make it and keep it as near normal as possible; and last, and not by a great way the least, constitutional treatment is necessary with a view to restoration of the tone and vigor of the general health. For the removal of foreign bodies, relief of stricture, and the treatment of enlarged prostate, only skillful surgery can avail. Before the tissue can be soothed and healed, it will be necessary to remove one constant cause of irritation, and not only of irritation, but, by absorption of direct poisoning, and that is unsound urine. Normal urine is feebly acid, varying in acidity within a short range. When much excess of acidity prevails, the

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urinary organs become irritated, and uric acid or urates, sometimes oxalic acid, are precipitated. Much discomfort may result to the patient, but by the use of alkalies and some medication of the organs of the portal circulation, the physician can easily correct the disturbance; but the urine that is the result, or cause, of grave urinary maladies, is the alkaline urine, practically the ammoniacal phosphatic urine.

This urine is morbific, and must be removed from the bladder; and, as soon as possible, an effort is to be made to restore the urine to its natural condition. The catheter and the syringe must be employed. Cystitis has many times been the result of the employment of a foul catheter. Let the catheter always be, not only scrupulously clean, but thoroughly disinfected. Let the bladder be cleansed by mild injections containing some unirritating disinfectant. In order to counteract the conditions that tend to decompose the urine, which the urine finds in the bladder when it arrives from the kidney, it will be necessary to protect the urine, and this can be done by giving such remedies as benzoic acid, which has the property of rendering the urine both acid and antiseptic. Many such remedies are mentioned in the books, and it is useless to enumerate them. The cautious use of turpentine, and copaiba, and other balsams, is often available because they are antiseptic, and, by their gently stimulating properties, assist the debilitated tissues of the bladder in their struggles for health.

Dr. Lionel Beale (*Urinary and Renal Disorders*) says: "We may bring the urine into such a condition that it will actually exert a soothing effect upon the mucous membrane, and promote the healing of any superficial ulcers that may be present."

To the same effect, one whose name carries authority on medical subjects, remarks, "that the best way to restore the mucous surface of the urinary apparatus to health, is to restore the urine to a normal condition."

Applications to the mucous surface of the bladder have long been used.

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Nitrate of silver, acetate of lead, sulphate of zinc, tannin, borax, salicylic acid, dilute nitric acid, carbolic acid, silicate of soda, and permanganate of potash, have been applied to the mucous membrane of the bladder for the purpose of medication.

Dr. Wm. D. Hooper (a Fellow of the Virginia Medical Society) has used with great success an injection containing thirty grains iodoform as a daily application to the surface of the bladder. The patient was an elderly gentleman suffering from enlarged prostate and chronic cystitis. After several years, the relief of the symptoms has continued. Occasionally, he still applies the remedy. To relieve the distress attending cystitis, moist hot applications to the perineum and supra-pubic region, and hot hip-baths, are useful. Mucilaginous drinks, such as flaxseed infusion, with lemon and sweet spirits nitre, are beneficial. Anodyne suppositories are sometimes indispensable. A milk diet is highly approved.

Constitutional Treatment.—Dr. Lionel Beale, already quoted several times, remarks that "the quantity of pus varies, increasing if the blood becomes poor, while the formation of pus diminishes as the patient's health improves. A greater quantity of material becomes pus when the system is weak and low than when the nutrition of the body is properly carried on." Again he says: "Many of the most obstinate cases of cystitis improve after some months, during which tonic treatment and careful management, as regards diet, have been steadily persisted in. Rest alone has much to do with the favorable result; but it stands to reason, that in a prolonged state of exhaustion, disease dependent upon an abundant discharge from a mucous surface, accompanied with emaciation and much lowering of the general health, the patient's chances of recovery will be much more increased, if the nutritive processes are assisted by good management of the digestive organs, and the careful selection of foods and tonic remedies, than if the case be left to the curative effects of time alone, when, for want of good management, the strength may fail and the powers become exhaust-

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ed to a degree which renders recuperation improbable."—(*Op. Supra Cit.*)

After this general statement, the proper tonic and hygienic treatment will suggest itself at once to the practitioner; for it must necessarily be varied to suit the pathological and pecuniary condition of different patients.

THE LAST RESORT.—When all other remedies for chronic cystitis have failed, cystotomy has been resorted to—that is, the bladder of the male has been opened from the perineum, as in lithotomy. "Weir has collected forty-seven cases of cystotomy for cystitis in the male; twenty-three patients were cured by the operation, seven relieved, four not benefited, while thirteen died—ten of these, however, from advanced disease of the kidneys."—(*Ashurt's Surgery.*)

Dr. Hunter McGuire, of Richmond, Va., with great sagacity, has proposed and successfully carried into operation a new mode of meeting this extremity. It is the formation of an artificial urethra, by means of permanent fistula in the supra-pubic region, communicating with the bladder. The operation is new, but is no longer experimental. The patients upon whom the operations were performed were in a desperate condition of disease and suffering. They recovered their health remarkably, some of them have been able to return to their occupations. They have fattened, and have obtained relief from their sufforings to that extent that life, which was once a burden, is now worth living.

McGuire's operation has advantages not secured by perineal cystotomy. The operation is much safer for the debilitated patient; it is not attended with constant perineal discomfort; it enables the patient to void his urine through the walls of the abdomen, which are not in the irritated condition found in the tissues of the perineum; nor are the tissues in constant contact with morbid urine, as in the draining operation, for the patient voids his urine at will. Convalescence begins sooner; and when the patient is able to leave his bed, he can go abroad without exciting inflammation by exercise, and without much, if any, discomfort.

Some of the patients who, a year or two ago, were bed-

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ridden, and rapidly nearing the grave, to all appearances, are now able to go about in a comfortable condition of health. It was an interesting exhibition of the muscular office of the bladder, when we were permitted to see Dr. ———, some three months after this operation, introduce a large catheter without difficulty or pain, through the new urethra, into the bladder, lie on his back, and, by exercise of his will, eject about four ounces of his urine into a basin placed on the bed by his side. The catheter is not necessary, and is not used when the erect position is assumed.

We never read or heard of anybody who has successfully attempted, or even proposed, to obviate incurable pathological obstruction of the flow of the urine through the natural channels by means of an artificial urethra, until Dr. Hunter McGuire invented this operation.

Clinical Reports.

A Case of Successful Supra-pubic Cystotomy in a Child—A New Manœuvre for Bi-manual Examination for Stone in the Bladder.

By R. F. LEONARD, M. D., of Baltimore, Md.

Late Prof. Surgery Baltimore Medical College.

On the 25th of July, 1890, I saw Fred. B., aged 6 years, for the first time. He was a robust, well-grown child, with this history: Shortly after an attack of measles, two years ago, he began to have irritable bladder, without any history of nephritic colic. This increased until last summer, when he complained of pain in the penis before and during urination, the pain being finally so violent that he would run screaming up and down the floor, holding the organ in his hand. Finally, the pain would cease, as he gradually emptied the bladder, but urination could not be perfectly accomplished unless he went to stool; consequently there was considerable rectal prolapse. Failing to obtain relief otherwise, he was carried to a hospital, where, after an examination, the surgeon declared he had no stone, but that circumcision was needed—evidently looking on his symp-

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toms as reflex. From constant handling, a balanitis had developed, for which copaiva was given. As far as I can learn, this examination was a bi-manual and not an instrumental one, and the reason of failure to detect the stone will directly become evident.

After watching him several days, I determined to examine him myself for stone, notwithstanding the high negative authority. Under chloroform, administered by Dr. H. C. Silver, the stone was easily found with a sound, both click and sensation being distinct. Under the bi-manual examination, it was impossible to feel the stone, for the simple reason that, in the recumbent position, the stone receded beyond reach, the bladder generally being much distended from the fact that the stone acted as a ball-valve, and occluded the urethra whenever contraction took place. The boy was then raised to a vertical position, my finger being still in the rectum and hand outside. Instantly the stone gravitated between the opposing fingers, and its size and shape were easily determined. Dr. Silver remarked that the position might be dangerous, and, in fact, the boy became pallid and his pulse weak, but he immediately recovered his normal condition by posture. A catheter was given to obviate the occlusion of the urethra, but it was impossible for the parents to use it, because of the boy's wilful and determined resistance.

On the 6th of August, assisted by Drs. A. Atkinson and Silver, I operated by the supra-pubic method. The abdomen was well washed with soap and hot water; the bladder thoroughly irrigated with boric acid solution; the rectum distended with a rubber bag, and the usual abdominal incision made, but the incision in the bladder was delayed and made difficult by the forcing out of the rubber bag and some dribbling alongside the sound, occasioned by efforts at vomiting, which made it necessary to intermit the chloroform. The peritoneum was exposed in the extreme upper end of the incision, but was not wounded. After extraction and digital examination of the interior of bladder, which was healthy, the bladder, at the lower angle was stitched to the skin (passing the stitches through all the tissues), leaving an opening large enough for the entry of the finger, the rest of the wound being entirely closed; silk was used exclusively, and the drainage tube was dispensed with.

This opening gradually closed, when, by the eighteenth day, the urine was passed entirely by the penis, and at the end of the third week, healing was complete. The healing

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was delayed by the early cutting out of the silk ligatures from the abdominal pressure, and an extensive deposit of crystals of phosphates on the wound and surrounding integuments. I think silver wire would have held much better, and a drainage tube would have saved much irritation and hastened recovery. There was but little reaction after the operation; at no time was there any cause for anxiety for the result.

The stone weighed 39 grains and measured $1\frac{1}{8} \times \frac{8}{8} \times \frac{5}{8}$ inches, mainly phosphate of lime; it was not examined for a nucleus.

It is dangerous, I know, to claim to originate a new surgical procedure, but after a somewhat considerable research over my available literature on the subject, I can find no mention of the vertical position having been used as an aid to bi-manual examination for stone, but possibly this manœuvre may already be familiar to many of your readers.

It is possible that the use of a catheter, in suitable cases, would so contract the bladder that the stone could easily be reached by the finger; but it is probably a fact that, owing to the constant obstruction, the bladder can never thoroughly empty itself, and there is always more or less residual urine. I wish, then, to call attention to this manœuvre for the detection of stone, and also to commend the supra-pubic method of operation, particularly in children, because of the slight injury it does, the slight risk to life, and the rapid and satisfactory recovery.

Three Cases of Wounds of Joint, Resulting in Good Joint Movement.

By ANGELO FESTORAZZI, M. D., of Mobile, Ala.,

LATE ASSISTANT SURGEON IN OUT-DOOR-PATIENT DEPARTMENT, CHAMBERS STREET HOSPITAL, NEW YORK.

I am prompted to give the history, treatment and result of the following cases, not that in doing so I pretend to unfurl to the profession any new mode of treatment, but simply because, in my estimation, injuries to joints are deemed as deplorable an accident as can be inflicted upon the

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human body, and, moreover, because the result in the three cases that came under my care was favorable in all of them.

CASE I.—*Wound of the Ankle Joint.* William Heard, white, aged 29, came under my care March 4, 1889. There was a wound one inch long situated over the left internal malleolus. Through this wound it could be felt that the malleolus was broken, and that the ankle joint was opened, the finger passing between the tibia and the astragalus. There was also a small wound on the anterior part of the ankle which did not communicate with the joint. The accident was caused by a block of wood falling upon his leg. The joint was syringed out with carbolic lotion (1 to 30), and the antiseptic dressing applied, with all care, in the usual manner. The leg was placed on a swing cage. The antiseptic dressing was continued for a fortnight, by which time the wounds were healed without suppuration. On the evening of the first day the temperature was 101.5°—it was never higher—and by the fifth day, was normal. The splint was kept on for thirty days. The patient was discharged, with the leg in a plaster-of-Paris bandage, April 13th. To-day he is walking about with a perfectly movable joint.

CASE II.—*Wound of the Knee Joint.* Alexander McG., white, aged 22, was conveyed in a carriage, from Cameron & Son's shingle mill, to my office, January 19, 1890, suffering with a wound, four inches long, across the thigh, one inch above the patella. Through this, the finger could be passed into the joint, and the posterior surface of the patella plainly felt. Around the lower and inner sides of the patella were three other wounds, each about one inch long; no communication of these with the joint was made out. A back splint was applied. The joint was scrupulously syringed out with a solution of bichloride of mercury (1–2000), iodoform sprinkled over the wound, and all covered with thymol gauze and borated cotton. This antiseptic dressing was continued for fifteen days, by which time all the deep part of the wound was healed, and a small superficial granulating surface was left. Eight hours after the accident the temperature was at its highest—99.6°. The pulse was never above 92. On February 10th, the splint was removed. The patient was discharged a few days later. He now walks as perfectly as ever, without any limp.

CASE III.—*Wound of the Knee Joint.* J. F., white, aged 39, farmer by occupation, residing some three miles from

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the city, sent for me on the morning of June 28th. After a most careful examination, I found a small perforating wound below and on the outer side of the patella of the right leg, through which synovia was freely flowing. A probe could be passed up into the joint through the opening. The wound was caused by the man falling on the tooth of a rake. A back splint was applied to this case, as in Case II. The parts were cleansed with carbolic lotion (1 to 30), and this was repeated daily for ten days. All antiseptic precautions were strictly observed. The wound healed completely in four days. The temperature reached 100.1° on the second day, when some effusion was found in the joint. Now, July 20th, the effusion has entirely disappeared, the splint has been removed, and the movements of the joint are perfect. The patient will be dismissed in a few days.

An Unusually Tight Urethral Stricture

By VIRGINIUS W. HARRISON, M. A., M. D., of Richmond, Va.

On April 28th, 1890, Joe B., a negro, æt. 56, weighing about 160 pounds, came to my office to consult me about a urethral stricture, which incapacitated him from urinating, save drop by drop. His general health had failed a great deal in the past two months. His family history was good as far as I could learn.

I told him I would operate on him the next day, which he reluctlantly consented for me to do, saying he suffered from this stricture seven years ago, and was operated on; but he admitted he did not follow the surgeon's advice in coming to his office to have the bougie introduced.

On the 29th of April, I went to his house with Dr. Chas. V. Carrington, expecting to do an internal urethrotomy. The patient having been given a mild purgative the night before, and ten grains of the sulphate of quinine that morning, a half a drachm of a 4 per cent. solution of muriate of cocaine was introduced into the urethra, and the bougie of Maisonnœuve's urethrotome was passed into the bladder with but little trouble. After having screwed on the guide, I was surprised to find it would not pass the stricture, which was in the penile or spongy portion of the urethra. I used as much force as I thought proper, and possibly a little more, but with no success. I then withdrew the instrument to try again in a few days. In the mean-

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time, I gave the patient the tincture of the chloride of iron.

I asked Drs. Lewis Wheat and Edward McGuire to meet me there on May 5th. I was the first to arrive. Having made everything ready for the operation, I concluded to try the instrument again before the doctors came. As before, the bougie passed well enough, but had the same old trouble with the guide. When I took the guide out, I was very much surprised to find I had left the bougie in the urethra.

By this time Drs. Wheat and McGuire arrived. We tried with the forceps to get the bougie, but finally had to cut down upon it, which was then removed with some difficulty, so tight was it grasped by the stricture. This grasping by the stricture explains the unscrewing of the bougie.

Having this opening low down in the urethra, I thought it would be an easy matter to reach beyond the stricture, but in this I also failed.

Now the question arose, whether it would be better to lay open the urethra, or use gradual dilatation, with a final view to internal urethrotomy. The latter was decided upon, and was commenced as soon as an inflammation of the penis subsided, which followed our attempt at urethrotomy. Filiform bougies were used, until five could be made to pass the stricture easily, and on May 26th another attempt at urethrotomy was made; this time with success, and a No. 18 American bougie was introduced. That night I was called to see him and found him with a congestive chill, which lasted several hours, and came near taking him off. For ten days he was too weak to allow the use of the bougie, though stimulants were used very freely.

However, this ill-fated negro has steadily improved, and at this writing, September 1st, weighs twenty pounds more than before the operation, and suffers none from the stricture. I used the bougie every day from June 6th to July 1st, twice a week in July, once a week in August.

While Resident Physician to "St. Luke's Home" and since, I had the opportunity of seeing Dr. Hunter McGuire do a great many internal urethrotomies, but this is the first one I ever saw when the bougie would pass the stricture, and the guide would not follow. At first, I thought possibly the bougie had passed into a pocket and doubled on itself, but that such was not the fact, was afterwards proved by removing the bougie from the stricture, and a flow of water following.

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Proceedings of Societies, Boards, etc

PROCEEDINGS OF THE SECOND SEMI-ANNUAL SESSION OF THE MEDICAL EXAMINING BOARD OF VIRGINIA.

The Second Semi-annual Meeting of the Sixth Annual Session of the Medical Examining Board of Virginia, was held at the Rockbridge Alum Springs, September 2nd, 3rd, and 4th, 1890.

The President, Dr. Hugh M. Taylor, of Richmond, Va., called the meeting to order at 8 o'clock P. M., Tuesday, September 2nd.

Roll call by the Secretary, Dr. Paulus A. Irving, of Farmville, showed the following members to be present: Drs. Ashton, Bowyer, Buckner, Conway, Chancellor, Glasgow, Green, Harrison, Irving, Martin, McGuire, Meriwether, Stone, Taylor, Tankard, Winston, and Young.

Plan of Examination.

Under the By-laws of the Board, "the applicant is required to answer at least *three-fourths* of the questions satisfactorily, and he is to be rejected if he fails to answer satisfactorily *thirty-three and one-third* per cent. of the questions on any one Section or sub-division of the whole examination. He is also required to sign his papers with a number furnished by the Secretary, who shall record the number after the applicant's name on his registered list, to be kept for the purpose, and only the President and Secretary shall be allowed to examine the aggregate sheet during the examination."

In all examinations before the Board, if not distinctly so stated, it is implied and understood that each party undergoing examination pledges his word of honor, without mental reservation or evasion in any manner whatsoever, that during such examination he will neither give to a fellow-candidate, nor receive from him or from any other source, any information relating to the subject immediately under consideration, unless it be with the knowledge and consent of the Examining Committee.

[The time allotted to make answers to questions in each Section is three hours.]

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Examinations September 3rd and 4th, 1890.

I.—SECTION ON CHEMISTRY.

Members:—Drs. J. H. Neff, of Harrisonburg, *Chairman;* Jesse H. Peek, of Hampton; P. B. Green, of Wytheville; and Benjamin Harrison, of Richmond city.

Ques. 1. State what is meant by chemical combination, and explain fully the difference between it and mechanical mixture.

Ques. 2. Give the laws governing chemical combination.

Ques. 3. Define alcohols, aldehydes, and ethers, and name one of each.

Ques. 4. Give the chemical formula, physical and chemical properties of peroxide of hydrogen.

Ques. 5. What are natural alkaloids? Name three of the more important, and give a reliable test for each.

Ques. 6. Give the color, reaction, specific gravity, and quantity (in twenty-four hours), of normal urine, and describe tests for the detection of albumen, sugar and the earthy phosphates in urine.

II.—SECTION ON ANATOMY.

Members:—Drs. Hugh M. Taylor, of Richmond (city), *Chairman;* Wm. P. McGuire, of Winchester; Paulus A. Irving, of Farmville; and R. D. Huffard, of Chatham Hill.

Ques. 1. Name the bones entering into the formation of the orbit and its foramen.

Ques. 2. Classify the knee-joint; name the ligaments and describe its synovial membrane.

Ques. 3. Describe the formation of the triangles of the neck.

Ques. 4. Describe the origin, course and branches of the internal pudic artery.

Ques. 5. Describe the contents of the right iliac region.

Ques 6. Name the organs in part covered by peritoneum; describe the pelvic peritoneum.

Ques. 7. Describe the origin, distribution, and functions of the superior maxillary nerve, and name its branches.

Ques. 8. Describe the median nerve and its branches.

III.—SECTION ON (I) HYGIENE AND (II) MEDICAL JURISPRUDENCE.

Members:—Drs. O. B. Finney, of Onancock, *Chairman;* T. B. Greer, of Rocky Mount; J. E. Chancellor, of Charlottesville; and James W. Tankard, of Burgess' Store.

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Hygiene:

Ques. 1. What precautions would you observe in the management of a case of scarlet fever, diphtheria, and variola, with reference to the patient and the public?

Ques. 2. Name some of the most reliable disinfectants—their mode of application, strength, and time required, to be efficient.

Ques. 3. What effete matters are thrown off in respiration? What is their effect on the health of the inmates of a crowded room? and what the proper preventive of serious consequences?

Ques. 4. What are the most important sanitary rules to be observed in selecting a building site for a country residence?

Medical Jurisprudence:

Ques. 1. Give the legal definition of a wound with the classification and character of wounds inflicted during life and post-mortem.

Ques. 2. Give medical proof and legal relations of abortion; state medical facts upon which reliance can be placed as furnishing evidence of infanticide.

IV.—Section on Physiology.

Members:—Drs. I. S. Stone, of Lincoln, *Chairman;* Robt. Glasgow, of Lexington; R. F. Young, of Love's Mills; and S. W. Carmichael, of Fredericksburg.

Ques. 1. Describe the mucous membrane of the stomach, as seen by the unaided eye, and give the physiology of gastric digestion.

Ques. 2. Describe the functions of the iris and crystalline lens.

Ques. 3. Name the cranial nerves.

Ques. 4. What parts of spinal cord are the natural channels of transmission for sensation and motion? What is meant by the decussation of the motor tracts, and at what point does it occur?

Ques. 5. Give cause of heart-sounds. What is meant by the impulse of the heart, and where located?

Ques. 6. Describe the appearance and chief characteristics of blood. Give briefly the chief constituents. How would you test for blood?

Ques. 7. Name the varieties of epithelium, and tell where distributed.

Ques. 8. What poison is eliminated by the kidneys? and is it found elsewhere than in the urine?

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V.—Section on Materia Medica and Therapeutics.

Members:—Drs. C. C. Conway, of Rapidan, *Chairman;* A. Trent Clarke, of South Boston; S. W. Budd, of Petersburg; James Parrish, of Portsmouth; and M. A. Douglass (Homœop.), of Danville.

Ques. 1. Name the principal influences modifying the effects of medicines.

Ques. 2. Explain what is meant by cumulation—and what by tolerance in therapeutics.

Ques. 3. What are the therapeutic actions of alteratives? and give examples of the most efficient.

Ques. 4. Name the most active styptics—giving mode of action and application.

Ques. 5. What are the relative doses of tinctures, fluid extracts, infusions, and decoctions?

Ques. 6. Give the poisonous action of bichloride of mercury, aconite, arsenic, and strychnine.

Ques. 7. In what diseases is nitrate of silver found serviceable, and in what doses?

Ques. 8. What are the physiological actions of camphor? How is it eliminated from the system?

Ques. 9. What are the medicinal properties of assafœtida—its uses and dose?

Ques. 10. Name the diuretics which act especially by influencing the renal circulation.

Ques. 11. Name the drugs which excite, and those which depress, the functional activity of the spinal cord.

Ques. 12. What drugs are preferable as *pure hypnotics* in simple insomnia, delirium in fever, and acute mania?

VI.—Section on Obstetrics and Gynecology.

Members:—Drs. Herbert M. Nash, of Norfolk, *Chairman;* B. L. Winston, of Hanover C. H.; G. D. Meriwether, of Pedlar Mills; H. M. Patterson, of Staunton; and George A. Taber (Homœop.), Richmond city.

Ques. 1. Give the signs and symptoms of pregnancy.

Ques. 2. Describe the fœtal circulation.

Ques. 3. Give the diagnosis and management of placenta prævia.

Ques. 4. Give the conduct of labor, as illustrated in the management of a face presentation.

Ques. 5. What are the indications for the use of the forceps—and how should they be applied in the L. O. A. presentation?

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Ques. 6. What are the indications for version—and how should podalic version be performed?

Ques. 7. Give the pathology and treatment of phlegmasia abba dolens.

Ques. 8. Give the causes of puerperal eclampsia and its treatment.

Ques. 9. Name the varieties of dysmenorrhœa.

Ques. 10. Give the symptoms and treatment of acute endometritis.

Ques. 11. Define vaginismus and give a brief description of Sims's operation.

Ques. 12. Give the causes and treatment of pelvic peritonitis.

VII.—Section on Practice of Medicine.

Members:—Drs. Rawley W. Martin, of Chatham, *Chairman;* Bedford Brown, of Alexandria; W. J. Harris, of Blackstone; R. I. Hicks, of Warrenton; and W. P. Jones (Homœop.), of Petersburg.

Ques. 1. Give the different methods of diagnosis. Define differential diagnosis.

Ques. 2. Give the causes and symptoms of angina pectoris, of acute tonsillitis, remittent fever.

Ques. 3. Give morbid anatomy of posterior spinal sclerosis, of acute pleuritis, chronic Bright's disease.

Ques. 4. Give the diagnosis of cystitis and its treatment; diagnosis of pneumonia, and of gastric ulcer.

Ques. 5. Give treatment of pulmonary hæmorrhage; of hæmaturia, of sciatica.

Ques. 6. Give some of the diagnostic and prognostic indications of human temperature.

VIII.—Section on Surgery.

Members.—Drs. William L. Robinson, of Danville, *Chairman;* T. M. Bowyer, of Bedford City; L. Ashton, of Falmouth; Leigh Buckner, of Roanoke; and F. Webster (Homœop.), of Norfolk.

Ques. 1. Give causes of
- Reducible hernia.
- Stricture of urethra.
- Delayed union and non-union in simple fractures.
- Inflammation—1st. Predisposing; 2d. Exciting.

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Ques. 2. Symptoms of
- Shot-wounds of intestines.
- Iritis.
- Intra-capsular fracture of femur.

Ques. 3. Diagnosis of
- Give briefly the diagnostic points of tetanus.
- Psoas abscess.
- Chancre and chancroid.

Ques. 4. Treatment of
- Compound fracture of ankle joint.
- Describe operation for excision of knee-joint.
- Hydrocele and varicocele.
- Describe an operation for radical cure of femoral hernia.

The following is a list of the twelve successful applicants during this examination:

Dr. Benj. L. Rex, Lovettsville, Va.; graduate College of Physicians and Surgeons, Baltimore, 1890.

Dr. Chas. T. Parrish, Portsmouth, Va.; graduate College of Physicians and Surgeons, New York, 1890.

Dr. Elliott T. Jett, Falmouth, Va.; graduate University of Virginia and University of the City of New York, 1889 and 1890.

Frederick A. Powell, Onancock, Va.; non-graduate.

Dr. William T. Henshaw, Martinsburg, W. Va.; graduate University city of New York, 1889.

Dr. James B. Woods, Charlottesville, Va.; graduate University of Virginia, 1890.

Dr. Saml. McHamill, Philadelphia, Pa.; graduate University of Pennsylvania, 1888.

Dr. Thos. M. Baird, Christiansburg; graduate Jefferson Medical College, 1890.

Dr. Robt. K. Calley, Centreville, Md.; graduate Chicago Homœopathic Medical College, 1885.

Dr. Thos. G. Ashton, Philadelphia, Pa.; graduate Jefferson Medical College, 1888.

Dr. H. P. Howard, University of Virginia; graduate University of Virginia, 1889.

Dr. William M. Randolph, Charlottesville, Va.; graduate University of Virginia.

Dr. Alexander Irvine, Richmond, Va.; graduate Medical Society of Virginia, 1887.

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INSTITUTIONS REPRESENTED BY THE APPLICANTS

BEFORE THE

MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

January 1st, 1885, to Sept 5th, 1890.

	Total number of applicants for examination from each institution.	Total number awarded certificate on first examination.	Total number rejected on first examination.	Rejected applicants appearing for exam'n 2d time.	Certificates awarded on 2d examination.	Rejected 2nd time.	Rejected applicants appearing for exam'n 3d time.	Rejected 3rd time.	Incomplete examinations, withdrawals or otherwise.
Medical College of Virginia	73	59	11	5	4	1	....	.....	3
University of Virginia—Medical Department	49	48	1	....	....	....	....	....	....
College of Physicians and Surgeons, Baltimore, Md.	47	31	14	6	4	2	....	....	2
University of Maryland—Medical Department, Baltimore	58	34	19	4	2	2	1	1	....
Washington University, Baltimore, (Extinct.)	1	.. .	....	....	....	....	....	....	1
Baltimore Medical College, Maryland	3	....	2	....	.....	..	....	.....	1
Baltimore University—School of Medicine	3	....	3	1	.....	1	....	....	....
Jefferson Medical College, Philadelphia, Penn	23	15	8	2	2	...	....	.....	....
University of Pennsylvania, Medical Department, Philadelphia	4	4	.....	....	....	....	....	....	....
Medico Chirurgical College, Philadelphia, Penn	1	....	1	1	.....	1	1	1	.....
Woman's Medical College of Pennsylvania, Philadelphia	1	1	....	....	.....	....	....	....	....
Hahnemann Homœopathic Medical College, Philadelphia, Penn.	2	2	.....	....	....	....	....	.. ..	....
Bellevue Hospital Medical College, New York	8	7	1	1	1	....	....	.. ..	....
University of the City of New York—Medical Department	13	10	3	1	.....	1	....	.....	....
College of Physicians and Surgeons, New York	5	5	....	.....	....	.....	....	....	....
Geneva Medical College, New York	1	1	....	....	....	....	....	....	....
National Medical College, Washington, D. C.	1	....	1	....	....	....	....	....	....
University of Georgetown, D. C., Medical Department	1	1	....	....	.....	....	....	....	.....
Howard University, Med. Department, Washington D.C. (colored)	15	2	13	4	....	4	....	....	....
Louisville Medical College, Kentucky	5	1	4	....	....	.....	.....	....	....
Hospital Medical College, Louisville, Ky	4	3	1	.....	....	.....	. ..	....	..
Kentucky School of Medicine, Louisville	2	2	.....	....	....	....	....	.....	.....
University of Louisville, Ky., Medical Department	2	1	1	.....	....	.....	.....	....	....
University of Tennessee—Medical Department, Nashville	1	1	....	....	....	.....	.....	....	....
Vanderbilt University—Medical Department Nashville, Tenn.	3	2	1	1	1	....	.....	....	....
Detroit Medical College, Michigan	2	1	1	1	1	....	.....	....	....
University of Michigan—Medical Department, Ann Arbor	2	2	....	....	.....	.....	.....	....	....
St. Louis Medical College, Missouri	1	1	....	....	....	.....	.....	....	....
Columbus Medical College, Ohio	3	1	2	1	1	.....	....	....	.....
Cincinnati Medical College, Ohio	1	....	1	.....	....	....	.. ..	....	....
Cleveland Homœopathic Hospital Medical College, Ohio	2	2	....	....	....	....	....	....	....
Leonard Medical College, Raleigh, N. C., (colored)	5	3	2	....	....	.....	.....	...	.....
Medical College, State of South Carolina, Charleston	1	.....	1	1	1	....	....	....	....
University of Vermont, Burlington	1	1	....	....	....	....	.....	.....	.....
Heidelburg, Germany	1	1	....	....	....	....	....	....	....
College of Physicians and Surgeons, Columbia, New York	1	1	..	.....	....	....	....	..	....
Georgetown College, Washington, D. C.	1	....	1	....	....	....	....	....	....
University of Virginia and New York	1	1	....	....	....	....	....	....	.....
Southern Medical College, Atlanta, Georgia	1	.....	1	.....	....	....	.....	....	....
Atlanta Medical College	1	....	1	....	....	....	....	....	....
University of New York	1	....	1	....	....	....	....	.....	....
Chicago Homœopathic Medical College	1	1	....	....	.....	.	....	....	....
St. George Hospital, London, England	1	1	....	....	....	....	....	....	....
King's George Hospital, London, England	1	.....	1	....	....	....	....	....	....
King College, London, England	1	....	1	....	....	.....	....	.....	....
Colleges unknown, (Record not sent by Examiners)	5	4	....	.....	....	....	.....	....	1
Non-Graduates	28	10	14	1	.....	1	....	.....	4
Totals	383	260	111	80	17	13	2	2	12

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STANDING IN EACH SECTION OF THE APPLICANTS REJECTED SEPT. 3RD AND 4TH, 1890, AND THE COLLEGES FROM WHICH THEY RECEIVED DIPLOMAS.

The standard of requirements for license is an average mark of 75 per cent. on the whole. If, however, an applicant receives less than 33⅓ per cent. in any one of the eight Sections, he is rejected.

[This Table is introduced solely for the purpose of indicating the branches of study in which the greatest deficiencies of preparation of the applicants are most noticeable. In addition, it should be remarked that had it been required to rate the applicants on ordinary correctness of English grammar, at least one third of those who passed satisfactory examinations on the required branches of medical study would have received very low markings, and far more than one-half of those rejected showed, in their examination papers, lamentable ignorance of English composition, spelling, etc.]

Nos. with which examination papers were signed.	INSTITUTIONS OF GRADUATION.	Chemistry.	Anatomy.	Hygiene and Med. Jurisprudence.	Physiology.	Materia Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	Aggregate.	Average.	Remarks.
3	Georgetown College, Washington, D. C.....	68	38	95	80	80	82	78	32	553	69 1/8	
5	Jefferson Medical College	20	35	92	75	79	74	75¾	75	526	65¾	
7	Southern Medical College, Atlanta, Ga.....	35	60	100	76	75	42	75	48	511	51⅝	
8	King's College, London, England.....	50	65	100	93	72	89	75	50	554	69¼	
9	University of the City of New York	57	38	100	76	84	82	94	43	574	71¾	
12	Atlanta Medical College.....	43	75	71	75	72	60	80	49	525	65⅝	
18	College Physicians and Surgeons, Baltimore...	38	65	89	85	75	62	79	65	558	69¾	
23	Howard University, Washington, D. C.....	60	55	100	63	70	80	83	22	533	66⅝	
24	Howard University, Washington, D. C.....	59	65	78	60	90	47	97	14	490	61¼	
19	Non-Graduate.....	75	78	92	90	90	72	75	24	591	73⅞	
21	Non-Graduate.....	35	43	92	86	70	75	77¾	80	559	69⅞	

INSTITUTIONS REPRESENTED BY THE APPLICANTS WHO CAME BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, IN SESSION AT ROCKBRIDGE ALUM SPRINGS, VA., Sept. 3rd and 4th, 1890.	Total Number Applicants from each College.	Total number Applicants Licensed.	Total Number Applicants Rejected.	Incomplete Examinations by Withdrawals.
Medical College of Virginia.....	1	1	.....	.....
University of Virginia.....	3	3	.....	.....
College Physicians and Surgeons, Baltimore.....	2	1	1	.....
Jefferson Medical College, Philadelphia.....	3	2	1	.....
University of Pennsylvania, Philadelphia, Medical Department.	1	1	.....	.....
University of City of New York—Medical Department.....	1	1	.....	.....
Howard University, Medical Department, Washington, D. C. (colored)...	2	.....	2	.....
College of Physicians and Surgeons, Columbia, New York.....	1	1	.....	.....
Georgetown College, Washington, D. C.....	1	.....	1	.....
University of Virginia and of City of New York.....	1	1	.....	.....
Southern Medical College, Atlanta, Ga.....	1	.....	1	.....
Atlanta Medical College.....	1	.....	1	.....
University of New York.....	1	.....	1	.....
Chicago Homœopathic Medical College.....	1	1	.....	.....
Non-Graduates.....	3	1	2	.....
King's College, London, England.....	1	.....	1	.....
Total.....	24	13	11	.....

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CHATTANOOGA MEDICAL SOCIETY.

[Reported by Dr. FRED. B. STAPP,]

The Chattanooga Medical Society held its first meeting, after the summer vacation, September 19, 1890. President R. S. Wert, presided. There was no essay, but the reports of the members were interesting.

Dr. H. Crumley said he had used pyrotannin in a strength of 1 to 4,000, very effectively on wounds, chancres, ulcers, etc. So far, he was very much pleased with it.

Dr. Crumley also reported a case of a man who had been given up to die of consumption. The case fell into his hands. He had the sputa examined by Dr. J. E. Reeves, who found no bacilli. After a treatment of ten days the man is much better.

Dr. Reeves said that in connection with the above case, he would like to report one which was under Dr. Trippe's care. The man had all the clinical symptoms of tuberculosis, but after several examinations could find no bacilli. It turned out to be a pulmonary abscess, and the man is now well and hearty.

He don't believe that deaths from tuberculosis are near as common as the death reports seem to show. Given a few symptoms and the diagnosis is consumption. The patient gives up and rapidly goes down. Hope is a great stimulant, and he believes in holding it out.

Dr. W. C. Heskett, of Sherman Heights, reported where a case was diagnosticated to be delirium of typhoid. The man was sick a few days and then died. The post mortem showed an abscess of the liver and a cheesy deposit in upper lobe of left lung.

Dr. Crumley told of a woman who ceased to menstruate at 46, and at 60 had a child. Her daughter, now 56, is menstruating regularly.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including Iron, Quinine, and Strychnine, etc., in *perfect solution*, and is not liable to the formation of fungous growths.

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Analyses, Selections, etc.

Stone in Bladder of Mixed Character—Solvent Power of Buffalo Lithia Water.

Dr. J. Buxton Williams, of Oxford, N. C., reports the following remarkable case in the October number of the *New England Medical Monthly*, which adds to the accumulating testimony proving the solvent virtue of Buffalo Lithia Water in certain forms of urinary calculi, etc.:

Noticing in the July number of the *New England Medical Monthly* a case of stone in the bladder, reported by Dr. Davis, of Meriden, Conn., I thought that perhaps the enclosed statement of a case, recently under my care, might prove of interest to the thousands of readers of your most valuable journal:

In August, 1890, Major T. B. Venable of Oxford. N. C., had "nephritic or kidney colic," from which he suffered for four days and nights, although under the influence of strong anodynes. From the severity and long continuance of his attack, I felt sure that a very large calculus was in the bladder. In ten days, urgent symptoms of stone in his bladder—constant desire to void urine, attended with much straining and blood, etc.—were present.

I prescribed Buffalo Lithia Water—no medicine. Soon small particles of stone and large quantities of sand made their appearance in the urine; still the stone was too large to make its exit through the urethral canal. From the amount passed in fragments and in sand I was sure that there was a very large stone—which had increased in size after entering the bladder. The Lithia Water was continued—the stone rapidly dissolved, and a calculus the size of a large pea was passed. The urine was still heavily loaded with fragments of stone and fine sand; another and larger part of the calculus was yet in the bladder.

The Buffalo Lithia Water was given in small and often-repeated doses, the urine voided at longer intervals, the stone continuing to disintegrate, melt away, until he was able, by great effort, to pass a stone twice as large as the first one. Since then all trouble has passed off, and the patient is himself again.

Before this Water was prescribed, the stone must have attained the size of a partridge egg.

The Buffala Lithia Water has not only the power to prevent the formation of calculi in the kidney, but is also a

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sure and almost absolute solvent of stone after it enters the bladder.

Analysis shows these calculi to be of a mixed character. Nucleus, uric acid, and main bulk of the calculi and outside of the triple phosphate variety.

Laparotomy versus Electricity in Ectopic Pregnancy.

In a paper read by Dr. W. H. Wathen, of Louisville, Ky., before the Tri-State Medical Society of Tennessee, Alabama, and Georgia, October 15, 1890, he said, that electricity, the only fœticidal means now recognized as orthodox by physicians who practice destroying the life of the fœtus in ectopic pregnancy without laparotomy, is no longer used for this purpose where the pregnancy has continued beyond three and a half or four months, and is seldom used after the third month.

At this time the fœtus cannot be killed except by electropuncture, and the complications and the deaths consequent on this practice have been so numerous, that the most radical advocates of electricity are afraid to introduce the electrodes into the gestation sac. The use of electricity in extra-uterine pregnancy is practically confined to the United States; and while it is advocated by men of recognized ability and learning in obstetrics and gynæcology, he is constrained to believe that very soon it will have no support.

The immediate and subsequent results of electricity as a fœticide are put in the most favorable attitude by Dr. Brothers (*Amer. Jour. Obstet. & Dis. Women & Children*, Feb., 1890). Every fact supposed to favor its use is made to sound its praise extravagantly, but the many unfortunate results, that speak volumes against its use, are quietly passed by, or an effort is made to brush them aside. Still the conclusions of the author furnish the strongest proof in favor of laparotomy. These statistics, compared with the statistics of laparotomy, show conclusively that the use of electricity in extra-uterine pregnancy is more dangerous, granting that there was no error in diagnosis.

But just here we have another argument in favor of laparotomy; for the difficulty, and sometimes the impossibility, of diagnosticating extra-uterine pregnancy in the early months is so manifest to experienced physicians that it would be ridiculous to claim that in all these cases pregnancy existed; while in the cases where laparotomy is done, a diagnosis may positively be made by seeing the embryo or

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the chorionic or placental villi. If the embryo or fœtus in an extra-uterine pregnancy is killed by electricity, a more or less diseased condition of the pelvic structures is left that endangers the health or the life of the woman—the dangers usually being increased as pregnancy advances; but if a laparotomy is done, there is no obstructed tube or other pathological condition left; and if the woman recovers from the immediate effects of the operation, she is entirely cured. Her life is no longer in jeopardy because of the danger of pelvic abscess, sepsis, or exhaustion, following an effort to discharge the suppurating contents of the gestation sac, through fistulous tracts, into the rectum, vagina, bladder, or through the abdominal walls. If we could eliminate the cases where there was an error in diagnosis, we would find that the mortality from the use of electricity, and the bad after-results, are far in excess of what follows laparotomy in the practice of experienced operators.

In an examination of Brothers' report of the subsequent behaviour of twenty-five cases observed at periods varying from one to eight years after the employment of electricity, we must be impressed with the fact that at least 50 per cent. of all cases carefully observed had thickening or distinct tumor, that may, at any time, require laparotomy to save the woman's life, or to cure her of confirmed invalidism.

In cases where laparotomy has been done, the mortality has not exceeded 5 per cent., and nearly all the women that recovered from the immediate effects of the operation were permanently cured. Most of these operations were done after rupture of the sac, where the conditions are not so favorable in laparotomy work.

Laparotomy, in all cases where the advocates of electricity would defend its use, is so simple, and so free of danger, that Dr. W. believes an experienced operator could save at least 95 per cent. of his patients, probably 99 per cent. And before the end of the third month, there is no condition requiring laparotomy where the operation is more easily done or the immediate or subsequent dangers fewer. In fact, its simplicity, compared with the operation for many pathological conditions in the pelvis, is so decided that in the practice of a successful laparotomist, who observes the rules of clean surgery, and adopts the most approved technique, the patients should recover. Tait's operations have been for ruptured tubal pregnancy, and he reports but two deaths in more than fifty patients. The first woman he operated on died because he did not then know the correct technique in

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such cases, and his second death was where the woman was in fatal shock before the operation.

One of the reasons given in favor of electricity is that these women cannot always be operated on by an experienced laparotomist. Nor can electricity be always used by men who are familiar with its successful use in such cases. If it is necessary to refer the woman to some specialist in laparotomy, it will as often be necessary to refer her to some specialist in electricity, who has all the electrical appliances necessary for good results in such work.

The services of an experienced abdominal surgeon may be obtained as easily as the services of a man experienced in the successful use of electricity. The operation is so similar to the operation for the removal of enlarged and slightly adherent ovaries, that a description of it would be unnecessary. If the sac has become adherent to any pelvic structure, it should be gently but quickly separated and ligated at its base with a double ligature, being careful to include both the distal and proximal ends of the vessels. In conclusion, he showed two specimens illustrating some of the phases of extra uterine pregnancy.

Pneumonia.

The following is the recent literature on the above subject by E. S. McKee, M. D., Cincinnati. The references to authorities, etc., are appended.

Roger and Gaume[1] have written a long article on the toxicity of the *urine in pneumonia*. They refer to the experiments of different writers, which show that the urine of persons in a normal state of health is poisonous to animals when injected into their veins. They experimented with the urine of eleven persons (cases of pneumonia) with the object of determining whether there was any change in the toxicity in this disease. A person in a state of health eliminates three or four times as much poison as when suffering from pneumonia. At the moment of defervescence, the urinary toxicity suddenly increases, and attains or surpasses the normal rate. The urotoxic discharge characterizes the urinary crisis, and is the only constant phenomenon. It lasts twenty-four or forty-eight hours, and attains its maximum on the day of the thermic crisis, or more rarely, the following day. After the defervescence, the urine again becomes but little toxic, descending suddenly or gradually to the normal. Physiological analysis reveals the toxicity of the urine, at the time of the crisis, to depend upon different poisons, little known from a chemical point of view.

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Shutz,[3] under orders from the Prussian government, has been experimenting on cattle by inoculating them with warm lymph from the lungs of cattle suffering inflammation of the lungs. He found such *inoculation afforded immunity* from the infectious inflammation.

Netter[3] relates the case of a woman who gave birth to a child when she was very ill with acute pneumonia. The child lived five days, and at the post mortem examination, pneumonia at the apex of the right lung was found, with double pleurisy, suppurative pericarditis and cerebro-spinal meningitis. A microscopic examination showed pneumococci. The *rarity of pneumonia at this age*, supports the conclusion that in this case it was due to infection from the mother. A similar infection of the fœtus has been found in rabbits, guinea pigs and mice. The pneumococci sometimes seem to produce pneumonia in the mother and pericarditis in the child, or supperative meningitis in the mother and pneumonia in the child. Netter has only found three cases of this pneumonic infection in woman.

Spleno pneumonia is reported by Dauchez,[4] Deville,[5] and Cheron[6]. The cases were characterized by the following symptoms: Flatness, considerable diminution of vesicular murmur, soft blowing broncho-egophony. To these may be added, fine crepitations limited to inspirations, preservation of Traube's space and the progressive increase of vesicular murmur from base to summit as recovery advances.

Stephan[7] reports two cases of *paralysis occurring in the course of pneumonia.* He gives the details of many others, collected from the literature of the subject, and discusses the opinions of various writers. He says paralysis may occur at the beginning of pneumonia, during its course, or in convalesence. The cause of these paralyses is, in some cases, a meningitis, but in many others there is an entire absence of gross organic lesion.

The *mortality of acute pneumonia* is the subject of a study by Townsend and Coolridge[30], using as their material the 1,000 cases treated in the Massachusetts General Hospital from 1822 to 1889. The average mortality was 25 per cent. This gradually increased from 10 per cent. in the first decade, to 28 per cent. at the present. This increase is shown to be deceptive for several reasons; the average age of the patients has been increasing from the first to the last decade. The relative number of delicate and complicated cases has increased, as has also the relative number of foreigners. These causes they consider sufficient to occasion the entire rise in

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mortality. The treatment which was heroic before 1850, transitional between 1850–1860, and expectant and sustaining since the latter date, has not, therefore, influenced the mortality rate, the duration of the disease, or its convalescence.

Etiology. Mosler[8] reports a number of interesting instances of the spread of pneumonia from one perron to another by *infection.* In one occurrence four persons were attacked by the disease in one family. The father was first taken sick and died on the fifth day. On the day of his death his wife was attacked, and also died on the fifth day. The son next became ill and died on the twelfth day. Seven days later the daughter was taken with the same disease, but recovered after a tedious convalesence. The autopsy on the son showed double fibrinous pneumonia with recent fibrinous hæmorrhagic pleurisy. The autopsy was performed thirty-six hours after death; consequently the micro-organisms were too numerous to permit a satisfactory conclusion. A hypodermic needle was inserted into the daughter's lung. From the fluid withdrawn a species of bacterium was obtained, having marked and distinguishing features, and clearly belonging to the group of bacteria of rabbit septicæmia, fowl cholera, and allied diseases. Thus it was different from Fraenkel's lancet-shaped coccus and the so-called pneumococcus of Friedlander. He thinks these cases demonstrate the necessity for the removal and disinfection of the sputum.

Bard[9] relates the story of a severe epidemic of measles in a village in the south of France, and finds that all or nearly all the fatal cases arose from infection from a single case. This was not only measles, but also broncho-pneumonia.

Vernon[37] considers the burning of natural gas an important factor in the causation of *broncho-pneumonia in children.*

Porter[10] considers *catarrhal pneumonia* influenced to a large extent by temperature changes. The extremes of cold are not favorable to the development of acute pneumonia.

The statement of Maragliono,[11] that pneumonia is an infectious disease, is, according to Dr. Porter's views, an extreme position, yet the fact remains undisputed, that there is a *micrococcus peculiar to pneumonia.*

Ballard[12] after a prolonged investigation into a specific pleuro-pneumonic fever which occurred in Middleborough, in England, decided that it was a specific febrile disease, which must be regarded as infectious in the sense of being communicable from the sick to the healthy. This resulted

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from direct relation of individuals, and also through the medium of emanations from sewers, drains, etc., which had received sputa or other excreta of the sick, or become infected in other ways. Three cases of a *specific pneumonic fever* have also been reported by Neal.[13] Crugneau[14] relates a case where a lady contracted pneumonia and died in eight days. A few days later her brother-in-law was down with pneumonia in the same house and died also in eight days. He thought isolation wise, especially of aged persons and those addicted to alcohol.

Wells[15] writes an extensive article on *pneumonic fever*, containing a great amount of data and 862 references. He says as to the causation: "There can be no doubt as to pneumonic fever, epidemic as well as sporadic, everywhere and always being due to the action of a single, peculiar, and specific morbific material." Baker takes issue with him, and cites his own tables, as also those of Wells, to prove that it is absolutely controlled by atmospheric temperature, or by conditions associated therewith.

Sternberg,[16] after investigation as to the *cause of pneumonia*, decides that it is evidently a specific infectious disease, the micro-organism of which is widely distributed. The development of an attack depends rather upon secondary predisposing and exciting causes, than upon the accidental introduction of the specific agent.

Sisbert[17] is satisfied that *Fraenkel's coccus*, described by Dr. Sternberg as micrococcus Pasteuri, would probably cause the more frequent form of pneumonia, as the asthenic variety. The asthenic, bilious, or typhoid form, on the other hand, is usually produced by the pneumococcus of Friedlander. In this consideration, the most important investigations concerning the germ theory of pneumonia, were those of Rudolph Emmerich,[18] in the state prison of Amber. The main point in the present status of our knowledge is the consideration of *fibrinous pneumonia as an infectious disease*, the germs of which thrive and multiply in the filth and dirt of dwellings; and we should do in internal medicines as the surgeon has long since done in operative surgery, prevent infection by cleanliness and antiseptics.

Delafield[19] regards *pneumonia as an infectious inflammation* requiring three factors: a pathogenitic bacterium, some exciting cause for the inflammation, and susceptibility. At different times and places some one of these three factors takes precedence.

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Slosse[20] considers pneumonia *a general, not a local malady.* The localization shows itself late, and can occur either in the lungs, the meninges, or in the endocardium. It is infectious and contagious. The cause of the disease is the pneumococcus.

Hirsch[21] says that the proportion of cases of *rheumatism complicated with pneumonia,* is usually estimated at far too low a figure, as the involement of the lungs is frequently overlooked.

Pignaon[22] recently described a form of *pneumonia due to malaria.* It occurs in marshy districts, July to October, and in persons already weakened by previous malaria. The distinctive clinical feature is the temperature, which reaches the highest point in the morning, and its lowest in the evening. The fever may disappear, then return again. It is almost always fatal unless treated with quinine.

Szontagh[23] reports a case of *white syphilitic pneumonia* in a child five years old, which was proven on autopsy.

Prudden and Northup[24] have examined morphologically and by cultures, the *lungs of seventeen children who died of diphtheria complicated by pneumonia.* The pseudo membranes in all but one of these cases, was shown to contain a streptococcus, which was, apparently, the cause of the diphtheria. In all but one of the cases of pneumonia, the lungs contained a similar streptococcus. They were able to induce in rabbits with the greatest uniformity, a lobular and broncho-pneumonia by the intra-tracheal injections of pure cultures of the streptococcus isolated from the children's lungs. They arrived at the conclusion that the acute lobular and broncho-pneumonia, which is apt to complicate diphtheria in the upper air passages in children, is a form of inspiration pneumonia, induced by the streptococcus diphtheriæ which finds access to the lungs from the foci of diphtheritic inflammation in the air passages.

Kreider[25] favors *baths* in those cases only which are not progressing favorably, as they exceed anything in giving relief to all bad symptoms. Difficulty of respiration and lack of secretion should lead to the employment of the baths regardless of the height of the mercury. The bath treatment is capable of shortening the duration of the disease and convalescence, and of reducing the mortality.

Deyer[26] has had some experience with *antipyrine in pneumonia,* which although not extensive enough to prove anything, is extremely suggestive. In his opinion, antipyrine is especially indicated during that stage of pneumonic pro-

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cess during which there is great interference with the circulation, on account of its power of not only stimulating the heart, but also of dilating the vessels at the same time.

Lees[27] has found very a great improvement following the use of the *ice bag* in the great majority of cases. The reduction of the temperature was from three to four degrees and usually occurred at once. In some slight cases and in two of broncho-pneumonia in children, the disease seemed to be promptly cut short.

Goodhart[28] has for eighteen months used no other application than the *ice bag in acute pneumonia.* In eight out of the eighteen cases reported, a good result followed—the temperature falling promptly and convalesence being rapidly established. Collapse might occur, but was easily detected and overcome by brandy and warmth.

Pieragnoli[29] pleads for the use of *calomel*, which he gives combined with opium, and avoids expectorants. The course of the pneumonia was milder, the infiltrations less firm, and the extension of the same more limited.

Green[30] has found much benefit from *peroxide of hydrogen*, a half teaspoonful well diluted in water every hour.

Clemens[31] reports forty-two cases of the severe forms of pneumonia which were treated exclusively with *inhalations of chloroform.* These inhalations not only alleviate all pain, but shorten the duration of the disease. The chloroform is diluted with alcohol.

Pieandt[32] treated 106 cases of pneumonia with *ice.* Though ten cases were double, only three out of the whole number died, and the epidemic was not a mild one. The method of treatment was to use an India rubber bag filled with ice continuously over the affected lung from twelve to twenty-four hours after the crisis.

Tordens,[33] in cases of *broncho-pneumonia in children, prefers apomorphia* in one to two centigrammes per day. Vomiting from this remedy is not followed by severe prostration. *Hydropathy* has remarkable efficiency in the broncho-pneumonia of children. It causes deep inspirations, produces a cutaneous derivation, and acts favorably with the vapor of water with which it fills the atmosphere. Tordens envelops his patient in cold or tepid compresses.

Petresco,[34] since 1883, has treated all cases of pneumonia with large doses of *digitalis*, and has had eminently satisfactory results. The attack is usually aborted by the second or third day, and the physical signs disappear altogether, generally at the end of the third. In some cases

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twenty-four hours have sufficed to enable the patient to return to work.

Nillson[26] has used *iodide of potassium* in fifteen grain doses every three hours, day and night, with a mortality of 5.17 per cent., from one-half to one-third his former death rate. The good effect of this remedy is doubtless due in some degree to the influence which syphilis exerts on the infectious diseases.

[1] *Rev. de Med.*, April and May, 1889.
[2] *London Lancet*, October 19, 1889.
[3] *Le Progrès Médicale*, March 16, 1889
[4] *La France Médicale*, December 27, 1888.
[5] *Weekly Med. Review*, October 5, 1889.
[6] *L'Union Medicale*, July 30, 1889.
[7] *Rev. de Medicine; Am. Journal Med. Sc.*, June, 1889.
[8] *Deutsch Med. Wochenschrift*, 13 and 14, 1889. *Med. Press and Circular*, September 25, 1889.
[9] *Lyon Medicale*, January 13, 1889, p. 43. *Practitioner*, March, 1889.
[10] *Med. Register*, April 6th, 1889. *Med. Review*, February 23d, 1889.
[11] *Med. Review*, February 23d, 1889.
[12] *Med. Chronicle*, June, 1889
[13] *Brit. Med. Journal*, September 14th 1889.
[14] *Med. Times and Register*, July 20th, 1889.
[15] *Journal Am. Med. Association*, February 9th and 23d, 1889. *N. Y. Med. Journal*, March 30th, 1889.
[16] *London Lancet*, February 23d, March 2d and 9th, 1889. *N. Y. Med. Journal*, February 16th, 1889.
[17] *Med. Record*, April 6th, 1889, p. 385.
[18] *Med. Record*, April 6 h, 1889.
[19] *Med. Record*, April 6th, 1889, p. 386.
[20] *Journal de Med. et de Chiret de Pharm.*, April 20th, 1888.
[21] *Berl. Klin. Wochenschr.*, December 24th, 1888. *Am. Journal Med. Sc.*, March, 1889. *Canadian Practitioner*, February 15th, 1889.
[22] *La Riforma Medica*, January 17th, 1889. *Brit. Med. Journal*, March 23d, 1889.
[23] *Jahrbuch fur Kinderheilkunde*, Bd. XXVII, Heft. 2. *London Med. Recorder*, May 20th, 1889.
[24] June, 1889.
[25] *Med. Rceord*, June 8th, 1889.
[26] *Med. News*, June 15, 1889.
[27] *Brit. Med Journal*, October 26th, 1889. *London Lancet*, November 2d, 1889.
[28] *Brit. Med. Journal*, October 26th, 1889.
[29] *Cont. fuer die Cosnant Therap.*, November, 1889. *Lo Sperimantale*, June 1889.
[30] *Jour. Respiratory Organs*, August, 1889.
[31] *Allg. Med. Cent Zeitungno*, 21, 1889 *Med. News*, June 22d, 1889.
[32] *Duodecem (Finnish) London Lancet*, August 10th, 1889.
[33] *Gen de Chir. et de Therpno*, 43, 38. *Jour. Am. Med. Assn.*, December, 1888.
[34] *Bull. Med. Mag.*, 28 ——, 1890. *London Med. Recorder*, October 20th, 1889.
[35] *Nordiskt-Medicinskt*, Bd. XIX, 26. *Occidental Med. Times*, May, 1889.
[36] *Med. News*, July 27th, 1889. *Med. Analectic*, August 22d, 1889. *London Lancet*, June 27th. 1889.
[37] *N. Y. Med. Record; Tr. Ind. State Med. Soc.*, 1889.

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Prostatic Hypertrophy.

In a paper presented the Mississippi Valley Medical Association recently, Dr. Wm. T. Belfield, of Chicago, collects 133 cases of operations upon the hypertrophied prostate, including eight of his own, as follows: 41 by perineal incision—mortality, 9 per cent.; 88 by supra-pubic cystotomy—mortality, 16 per cent.; 4 by combined perineal and supra-pubic incision; none fatal. In fifty-six of these cases, the essential facts before and after operation are furnished. The patients had been the subjects of cystitis, and dependent upon the catheter, for periods varying from one to ten years. In all, the cystitis was cured; in thirty-eight (two-thirds) voluntary urination was restored, and continued during the time of observation, six months to two years and a half: in eighteen this function was not recovered. Fifteen of these fifty-six cases were complicated with stone; excluding these—since it might be objected that the cure resulted rather from the calculus extraction than from the prostatic operation—there remained forty-one cases of uncomplicated prostate operations; of these, thirty-two patients (four-fifths) recovered the power of urination, and in nine this ability was not recovered.

Coeliotomy (pronounced soft, se-le-otomy).

This is the new word proposed by Dr. Robert P. Harris, of Philadelphia, for abdominal sections, in a pamphlet just issued with the title "*Coeliotomy*—this, and not laparotomy, is the proper Greek synonym of 'abdominal section.'—laparotomy being an incision of the flank only." Thus he would have us use *coelio-hysterotomy* for Cæsarean section; *coelio-hysterectomy* for exsection of the uterus by abdominal incision; *puerperal coelio-cystectomy* and *coelio-cystotomy* for exsection of an ectopic gestation cyst, or exsecting the same without its removal; *coelio-nephrectomy* for abdominal exsection of kidney, etc.

Bromidia for Tetanus.

The *Journal of the American Medical Association*, of July 19th, 1890, publishes a full paper by Drs. Robert Reyburn and A. W. Tancil, read before the District of Columbia Medical Society, October 16th, 1889, reporting the case of a colored boy, aged 14 years, who had traumatic tetanus, and recovered under the use of bromidia as the principal article of dependence. The total amount taken, in teaspoonful doses, between August 18th and September 26th (when the patient was discharged cured), was ℥xv and ℥ij.

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Book Notices.

Practical Diagnosis and Practical Urinalysis. An Epitome of the Physical Signs of the Heart, Lung, Kidney, and Spleen, in Health and Disease. Edited by JOHN E. CLARK, M. D., Professor of General Chemistry and Physics in the Detroit College of Medicine. *41 illustrations.* Cloth. 12mo. 200 pages. Price, post-paid, $1.00 Illustrated Medical Journal Co., Publishers, Detroit, Mich.

In the arrangement of this work the object has been to present a systematic and condensed course of Physical Diagnosis and Urinalysis. The portion on Urinalysis consists of two parts, practical and reference. The editor believes there is a demand, in many medical schools and by many medical students, for a short, definite course of organic chemistry, touching alone on those subjects of every day interest to the medical practitioner, such as the analysis of urine, chemical and microscopical; the examination of sputa, bile, blood, bacteria, etc.; methods for the qantitative estimation of the more important urinary constituents, normal and abnormal, such as urea, chlorides, sugar, albumen, etc. To meet these requirements the editor has compiled this volume. Teachers in the laboratory will find the work of advantage as giving the plan for definite instruction, with such manipulatory details as will enable students to pursue the course of urine analysis with the minimum of assistance. This is essentially the same as the course given by the editor in the college with which he is connected. Plates have been introduced as needed to still further assist in elucidating the text.

Mineral Springs and Health Resorts of California, with a Complete Chemical Analysis of Every Important Mineral Water in the World. Illustrated. By WINSLOW ANDERSON, M. D., Joint Editor, etc., *Pacific Medical Journal*, Assistant to Chair of Medical Chemistry and Materia Medica, University of California, etc. San Francisco. The Bancroft Co. 1890. Cloth. Royal. 8vo. Pp. 384. Price, $1.50. (From Publishers).

The basis of this work is a prize essay, to which was awarded the annual prize of the Medical Society of the State of California, April, 1889. It is an instructive book as to the uses of mineral waters in general, and is especially valuable in description of the medicinal mineral springs, etc., of California. But we find some important omissions as

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to Springs of great value of recent development in the Eastern or Southern States. For instance, Bowden Lithia Springs, of Lithia Springs, Ga., are not even mentioned; and yet it is one of the most remarkable of mineral springs in the world, because of the large amounts of bromine and lithia held in solution. No spring water in America rivals it where the constitutional effect of the bromides is sought. The Capon Springs, of West Virginia, are given a full page, but this fails to bring out the wonderful medicinal virtues of this resort. Buffalo Lithia Springs are mentioned as Buffalo Springs, and the chief element for which the water is noted all over the United States, would not be supposed from the name; and in the table of its analysis, not even a trace of lithia is attributed to it. The tables of analyses of Alleghany Springs and Blue Ridge Springs, Va., water are given; but the value of the book would have been greatly increased, had something been told of the remarkable curative values of these waters. Otterburn Lithia Springs, Va., are not referred to, and yet analysis is given of Church Hill Alum Springs, of Richmond, Va., although we doubt very much if a tenth of the population of this city ever heard of such a place, and a much smaller number would now be able to say even where it ever was. The work is undoubtedly valuable as to California Springs, but is not of much use as to Virginia, West Virginia, and other Springs of this section.

The Science and Art of Obstetrics. By THEOPHILUS PARVIN, M. D., LL. D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia; one of the Obstetricians to the Philadelphia Hospital, etc. Second Edition, Revised and Enlarged. 8vo. Pp. 701. With 239 Woodcuts and a Colored Plate. Cloth, $4.25; Leather, $5.25. Philadelphia. Lea Brothers & Co. 1890. (From Publishers).

This thoroughly revised edition of Dr. Parvin's "Science and Art of Obstetrics," supplies the need of the times for a thoroughly reliable text-book and practitioner's guide. The thirty odd years of the author's experience as a teacher, and a longer experience as an obstetrician, have enabled him to select and to speak instructively on those very points which are most serviceable in practice. There is no book on obstetrics to-day that will be more valuable as a student's text. Extensive notes in small type all through the work add much to its interest, and become explanatory of points or descriptions given in larger type. All the more recent

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of approved doctrines and well sustained practices in obstetrics have been brought out in description and illustrations. We most unreservedly commend this work to the favor of any practitioner in need of a text book on the "Science and Art of Obstetrics." It is a work useful for constant reference as well by him who wishes to refresh his memory as to any of the details of obstetric practice.

Treatise on Headache and Neuralgia, Including Spinal Irritation, and a Disquisition on Normal and Morbid Sleep. By J. LEONARD CORNING, M. A., M. D., Consultant in Nervous Diseases to St. Francis Hospital, etc. With an Appendix on *Eye Strain, a Cause of Headache.* By DAVID WEBSTER, M. D., Professor of Ophthalmology in New York Polyclinic, etc. Illustrated. Second Edition. New York. E. B. Treat. 1890. Demi 8vo. Pp. 259. Price, $2.75. (From Publisher).

There is no practitioner in any department of medicine to whom this book will not be of service; for in all specialties, so called, headache and neuralgia, represent morbid states that must be met. The distinguished authors have confined themselves mostly to those points which are directly related to the cause, the recognition, and the treatment of the various forms of headache, spinal irritation, etc. Dr. Corning adopts the view that during natural sleep, the amount of blood circulating in the vessels of the pia mater is at a minimum. He describes various forms of insomnia, and the appropriate treatment for each. The section on Eye Strain, by Dr. Webster, is limited to consideration of those forms of headache which are dependent upon errors of refraction, impaired accommodation, and insufficiency of the extrinsic ocular muscles. This section of the book is also of great value to the profession, because it makes plain the cause of many forms of headache now too much overlooked. The book is well issued; and because, too, of its subject matter, so practically arranged and presented, the doctor who does not read it loses much.

Wood's Medical and Surgical Monographs. *Published Monthly.* VOLUME 7—Nos. 2 (*August*) and 3 (*September, 1890*), and VOLUME 8—No. 1 (*October, 1890*). 8vo. About 250 pages each. $10 a year. Single copy, $1.

These *Monographs* are so useful, and are becoming so generally known, and are, withal, so cheap, that we feel we are doing a service to the practitioner in announcing the con-

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tents of each monograph. *August No.*—"Morbid Blushing—its Pathology and Treatment," by Dr. Harry Campbell; "Alcoholism in Women," by Dr. Thomeup; "Different Methods of Lifting and Carrying the Sick and Injured," by Dr. Geo. H. Darwin; "Treatment of Ingrowing Toe-Nail," by Dr. Jos. Amiard; and "Chronic Bronchitis and its Treatment," by Dr. William Murrell. *September No.*—"Insomnia and its Therapeutics," by Dr. A. W. Macfarlane; and "Index for Volume 7." *October No.*—"Suppurative and Septic Diseases," by Dr. W. Watson Cheyne; "Pharmacopœia for Diseases of the Skin," by James Startin; "Nasal Neuroses," by Dr. Granville Macdonald; "Artificial Respiration," by Dr. Benj. W. Richardson; "New-Born Infant—its Physiology, Hygiene, and Nourishment," by Dr. A. Auvard; and "Urine in Neurotic Diseases," by Dr. Alexander Peyer.

Text-Book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By ROBERT AMORY HARE, M. D., Clinical Professor of Diseases of Children, and Demonstrator of Therapeutics in University of Pennsylvania. Philadelphia: Lea Brothers & Co. 1890. Cloth. 8vo. Pp. 632. Price, $3.75; in leather, $4.75. (From Publishers.)

This is an able book by an able author, and should be in the hands of every practitioner of medicine. It is so arranged by titles and index as to serve as a ready reference book, if such be needed; but it is also a book that "furnishes food for thought" on almost every therapeutic subject. It is, however, intended to be so thoroughly practical in all its dealings that what is as yet considered "empirical therapeutics" has not been omitted. Twelve pages compose Part I, and they are given to general therapeutic considerations. Part II describes drugs, and details their physiological actions, their toxic effects, their therapeutic uses, their modes of administration, doses, etc.; and this Part is so fully up to date as to include aristol, chloralamide, etc. Part III is given up to remedial measures other than drugs (such as acupuncture, antiseptics, cold, counter-irritation, etc.), and foods for the sick. Part IV takes up about 240 pages on the therapeutics of diseases, and is very excellent for the practitioner. Diseases are named in their alphabetical order, so that they may be readily referred to. After this Part comes a Table of Doses, covering 7 pages. Then follow the indices. Professors should tell the students of their graduating classes about this book, which they will long find useful in practice.

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Saunder's Pocket Medical Lexicon. By JOHN M KEATING, M. D., Fellow of College of Physicians and Surgeons, etc., Philadelphia, and HENRY HAMILTON, Author of "New Translation of Virgil's Æneid into English Rhyme," etc. Philadelphia: W. B. Saunders, 1890. Cloth. 32mo. Pp. 279. Price, 75 cents. (From Publisher.)

We confess we do not see the need of this book, although its authors are men of ability and eminence. It is a poor dictionary—necessarily so when so much is attempted in so small a compass—and but a comparatively few of the "terms used in medicine and surgery" are even so much as given. The "Addenda" does give a tolerably full statement of the etymological factors common in medical terminology; and the comparative table of metric and apothecary weights, as also the comparative thermometric scale table, and the list of abbreviations used in prescriptions, are scant enough as to those matters for which one would be apt to refer to any dictionary. While all these things are too briefly synoptized to be useful, a full page is given to the Greek alphabet, which alphabet should have been learned before the student undertakes a medical study. If a *little* learning is a dangerous thing, how much more dangerous for satisfactory definitions must be a dictionary so little as this one?

Essentials of Diseases of Children. Arranged in the Form of Questions and Answers. By WM. M. POWELL, M. D., Physician to Clinic for Diseases of Children, in Hospital of University of Pennsylvania, etc. Philadelphia: W. B. Saunders. 1890. Demi 8vo. Pp. 222. Cloth, $1; Interleaved for taking Notes, $1.25. (From Publishers.)

"Saunders' Question Compends," of which series the book before us is No. 15, are of incalculable value in assisting the practitioner and student who wish to review their medical studies in the most ready way. They are specially valuable in preparing for examinations. Every answer is authoritative, and is based almost entirely on the authority of one or the other of the following standard writers: J. Lewis Smith, of New York; Edward Ellis, of New Zealand; J. E. Goodhart's American Edition; Louis Starr, of Philadelphia; and Meigs and Pepper. All subjects are brought thoroughly abreast of the times. For members of Medical Examining Boards, these "Question Compends" are likewise useful; and if more generally adopted for examination purposes, they would compel a more uniform series of answers, by which the more readily to judge of the merits of answers given orally or by writing.

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Essentials of Medical Chemistry and Urinalysis. By SAM. E. WOODY, A. M., M. D., Professor of Chemistry and Public Hygiene, and Clinical Lecturer on Diseases of Children, in Kentucky School of Medicine. Third Edition. Revised, Enlarged, and Illustrated. Philadelphia: P Blakiston, Son & Co. 1890. Cloth. 12mo. Pp. 157.

Dr. Woody writes this book, not so much from the standpoint of an original chemist as from that of a teacher, and knowing the needs of the medical student—as to what he should learn, etc., in medical chemistry. The foundation steps of chemical knowledge are well laid, but in the reference to articles, compounds, etc., a careful selection has been made, so as to teach the medical student what he should know about chemistry, while those matters that simply interest the laboratory chemist, without distinct bearing on a pharmacal or medical subject, are omitted. The section on urinalysis is very valuable, and should be mastered by students and practitioners. It is a very valuable book for the practitioner who wishes to know facts without the tedium of giving chemical theories, etc.

Text-Book of Comparative Physiology. By WESLEY MILLS, M. A., M D., D. V. S., Professor of Physiology in the Faculty of Human Medicine, and the Faculty of Comparative Medicine and Veterinary Science of McGill University, Montreal, etc. With 476 Illustrations. New York: D. Appleton & Co. 1890. Cloth. 8vo. Pp. 636. (For sale by West, Johnston & Co., Richmond.)

This text-book is intended for students and practitioners of comparative (veterinary) medicine. It is not an abridgement of the author's former work on "Animal Physiology," but is much more comparative and specialized as regards the domestic animals. It is of essential service to those practitioners of human medicine who, by force of surroundings, have to become veterinarians as well. This is, in reality, the only handy *text-book* on animal physiology published in the English language; and, most fortunately, it is by an author eminent in his profession, a student of physiology in the highest sense, an accurate recorder, and a teacher of excellent judgment. We most cordially commend this book to professors and students alike. Our limits do not permit an attempt at a review, and we have not seen a single statement in the book that calls for adverse criticism. Its able accuracy of statement, and its practical manner of imparting information, at once establish this as the standard text-book of comparative physiology.

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Compend of Surgery for Students and Physicians. By ORVILLE HORWITZ, B. S., M D., Chief of Outdoor Surgical Department of Jefferson Medical College, etc. Third Edition. Thoroughly Revised, Enlarged, and Improved. With 91 Illustrations. Philadelphia: P. Blakiston, Son & Co. 1888. Cloth, 12mo. Pp. 210. Price $1. Interleaved Edition for Notes, $1.25. (From Publishers.)

This is a synoptical compilation from many standard works on Surgery, and the book is useful for either a ready reference-book by the practitioner, or a review-book by the student. The descriptions are all good, and are authoritative. So that the practitioner who adopts its teachings will be following the lead of some surgeon of recognized ability. It is one of a series of "Compends" being issued by the excellent Publishers, which is to be most unreservedly commended to the "busy practitioner," as it appears that every doctor who now "swings out his shingle" claims to be too busy to read treatises.

Intestinal Diseases of Infancy and Childhood. By A. JACOBI, M. D., Professor of Diseases of Children, College of Physicians and Surgeons, New York, etc. 1890. Geo. S. Davis, Detroit, Mich. Two Volumes of "The Physician's Leisure Library." Second Edition. 12mo. Total pages of both Volumes, 266. Price per Volume or Number—Paper, 25 cents. (From Publisher.)

The author has written this work "up to the times" a year ago. His book is thoroughly practical, and whatever of theorizing there be in it is essential. It devotes full sections to the physiology of digestion of children and hygiene of infants and children, and to the pathology and therapeutics of their diseases. We find but little change in this edition, as compared with the first edition, issued in 1888, except that the first edition was in one volume, while the second is divided into two. Dr. Jacobi is so able an author, and so highly appreciated as a practitioner—especially in diseases of children—that this announcement ought to be sufficient to induce every doctor to get this work. Send 50 cents to the publisher for a copy.

Dust and its Dangers. By T. MITCHELL PRUDDEN, M. D., Author of "The Story of the Bacteria," etc. G. P. Putnam's Sons. New York and London. 1890. Cloth. 16mo. Pp. 111. Price, 75 cents. (For sale by West, Johnston & Co., Richmond.)

Such a monograph as this, if well read, would do good to both doctors and the laity. In the simplest of entertaining

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language, it conveys information and impresses truths of vital importance. It shows how much of danger there is in the ordinary dust of a sick room, and in the halls for public assemblages—especially in the causation of consumption; and it points out the essential value of sweeping out and washing away dust from apartments where consumptives have been, and where healthy people are to stay. Of course it assumes the bacterial origin of consumption, and gives plates and drawings to show the manner of development and the shape of consumptive bacteria.

Recherches Cliniques et Theraputiques sur l'Epilepsie, l'Hysterie et l'Idiotie. Par BOURNEVILLE, Médicin de Bicêtre, SOLLIER, Conservateur du Musée de Bicêtre, A. PILLIET, Ancien Interne du Service. Volume X. With 22 Wood-cuts and one Chromo-Lithographic Plate. Paris. Publications of Progres Medical. 14 Rue des Carmes. 8vo. Pp. lvi—188. Paper. Price, 5 francs. (From Publishers.)

Part I of these Clinical and Therapeutic Studies of Epilepsy, Hysteria, and Idiocy, relates to the history of the service at Bicetre during 1889. Part II records the results of some observations on the use of bromide of gold, bromide of camphor, and picrotoxine. In view of its expensiveness, and its moderate results, bromide of gold is not recommended. Bromide of camphor has undoubted value in lessening the frequency and shortening the length of each attack of epileptic vertigo. Picrotoxine did good in one of six cases, ameliorated the attack in one case, and in the other cases it aggravated the symptoms. Part III is taken up with the clinical and anatomical pathology of idiocy, hystero-epilepsy, etc. The work is very valuable to those who are attempting to keep up with progress in nervous diseases, etc.

Progressive Exercises in Practical Chemistry. By HENRY LEFFMANN, M. D., Ph. D., Professor of Chemistry in Woman's Medical College of Pennsylvania, in Pennsylvania College of Dental Surgery, etc., and WILLIAM BEAM, M. A., Demonstrator of Chemistry in Pennsylvania College of Dental Surgery, etc. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1890. 12mo. Flap Leaf. Pp. 104. Cloth. (For sale by West, Johnston & Co., Richmond.)

This book points out the methods of laboratory instruction in inorganic chemistry in the Colleges with which the authors are connected. It is adapted for use in conjunction with any standard manual of elementary chemical princi-

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ples. In short, it is devoted to the details for performing experiments, and its excellence consists in the fact that the authors have pointed out the economical forms of satisfactory experimentation. It records the details of 252 experiments which the teacher should show before his classes. It is a sort of self-teacher, and for chemical experimental purposes it suits admirably the wants of the pupil.

Editorial.

Southern Surgical and Gynæcological Association.

The session of this important Association, which is to be held in Atlanta, Ga., November 11th, 12th, and 13th, 1890, promises to be eminently successful. The Preliminary Programme, issued by that most efficient of all Secretaries, Dr. W. E. B. Davis, of Birmingham, Ala., gives a list of papers to be presented, with able authors, that shows the Association to be striking for the useful in practice, and the advancement of the sciences of surgery and gynæcology. Members of the profession generally are cordially invited to attend. Though the President, Dr. Geo. J. Englemann, of St. Louis, has been absent in Europe for months, he has, in many ways, manifested intensest interest in this meeting. Members of the medical profession from any part of the country are cordially invited to attend. We have made arrangements for reports for our December number. This Association has among its membership some of the most distinguished surgeons and gynæcologists of America. Dr. Virgil O. Hardon, of Atlanta, is Chairman of the Committee of Arrangements. It is to be hoped that the Committee will be able to secure reduced rates over railroads, etc., going to and returning from the session.

Corrections Typographical.

In the last clause of page 487, September number, in notes of Dr. J. N. Upshur's remarks, instead of, "He would be in error to state," etc., it should read, "He was *not* in error in stating," etc.

Correct lines 7 and 8 from bottom of page 433, September number, in Dr. Coston's article, so as to make them read, "'Monthlies' had never appeared; but once a month, she had a convulsive seizure."

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Subject of Dr. Hunter McGuire's Prize Essay for 1891—Pyelo-Nephritis.

Dr. Hunter McGuire has informed us that he will announce the subject of *Pyelo-Nephritis* as the one for his Prize of One Hundred Dollars, to be awarded during the session of the Medical Society of Virginia in Lynchburg, Va., October, 1891. This Prize is limited to members of the Medical Societies of the States of West Virginia, Virginia, and North Carolina. Dr. McGuire is an Honorary Fellow of each of these State Societies. The Essays offered in competition must be in the hands of the Secretary of the Medical Society of Virginia (Dr. Landon B. Edwards, Richmond, Va.,) by the first day of September, 1891. They must be type-written or printed. Each one must be designated by a motto and accompanied by a sealed envelope containing this motto and the author's name and his post-office address. In advance of the session, these Essays will be handed to a Committee to be appointed by the President of the Medical Society of Virginia. This Committee will report the two best Essays, each of which will be read before the Society in open session, and the Prize will be awarded to the one that the vote of the Society may determine to be the best. Fuller statements of the conditions of the award of this Prize will be given in the forthcoming volume of *Transactions* of the recent session of the Society, as well as in future issues of this journal.

A Merited Compliment to Dr. Joseph Jones, of New Orleans, La.

Dr. Benjamin Ward Richardson, F. R. S., of London, England, has dedicated the sixth volume of his original work, "The Asclepiad," to Dr. Joseph Jones, of New Orleans, in the following words: "To Joseph Jones, M. D., Professor of Chemistry and Clinical Medicine, in the Tulane University of Louisiana. A model student of medicine, always seeking, always finding, always imparting, with unwearied industry, new and useful knowledge to the great Republic of Medical Science and Art, this, the sixth volume of Asclepiad, is sincerely dedicated." Dr. Richardson is the most eminent living British writer and authority in experimental therapeutics and practical hygiene. He has devoted his life to the elevation of the medical profession by his extensive original researches, and to the alleviation of the ills of humanity by his works on insanity and hygiene.

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The New York Pasteur Institute

Comes out with a circular—its first report—claiming that since February 18th, to October, 1890—in eight months—it has treated 130 patients for hydrophobic prevention, and just as might have been expected, *had none of them gone there.* "All these persons are to-day enjoying good health." We look upon it as a fortunate escape that none of those subjected to experimentation or inoculation died. In our city a year or so ago, a man was bitten and a wound produced by a rabid horse that died of the disease. Notwithstanding the natural fright of the individual, and his dread of hydrophobia, he was cured of all signs of the disease by the surgeon who saw him an hour or so after the injury, and who impressed the belief upon the patient that he was a fool for believing that rabies affects the human subject.

Such an Institute as the one now apparently seeking advertisement at our hands, is useless, and the result of the records given proves nothing—other than, that the existence of the institution, no doubt, led many to fear they had hydrophobia, who most probably would not have left their work at home had not the influence of suggestion of danger of the disease been impressed upon them by the advertisements and solicitations of the institution itself.

The Medical News Visiting List, 1891, is Ready.

The Weekly, dated edition, is arranged for 30 patients; the Monthly, undated, for 120 patients; and the Perpetual, undated, for 30 or 60 patients a week. All (except the Perpetual for 60 patients) editions contain 36 pages of text, giving many valuable memoranda to refresh the memory of the practitioner in moments of hasty need. All are of wallet size, and have leather flexible cover, pocket lead pencil, and erasable tablet, etc. Price, any style, $1.25; with thumb letter index, 25 cents extra. This is a very serviceable and popular Visiting List. Messrs. Lea Brothers & Co., Philadelphia, Pa., Publishers. Reduced rates to subscribers of *Medical News*, or *American Journal of the Medical Sciences.*

Change of Names of Insane Asylums to Hospitals.

The Superintendent of the Western [Va.,] Lunatic Asylum, at Staunton, Va., Dr. Benj. Blackford, has persuaded his Board of Directors to petition the Legislature to drop the word Lunatic Asylum from the title of his Asylum, and to call the institution the Western State Hospital. If such a measure were adopted for like institutions all over the

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country it would be considerate of the sensibilities of patrons; but some qualifying term should, in some way, be attached to such a title as Western or Eastern or Central State Hospital; for otherwise it would lead citizens of other States to suppose that Virginia has what it has not got—a general State Hospital. But Dr. Blackford is right in trying to get rid of the words "Lunatic" or "Insane Asylum," as the title of such institutions as are devoted to the care of patients and treatment of diseases of the brain and nervous system.

Women Medical Students in Johns Hopkins' University.

An endowment fund of $100,000 has been raised, and contributed to the proper authorities of this University, for the purpose of giving female medical students the same advantages for studying medicine, etc., as are now granted to men. Gradually the walls of prejudice which have been, for centuries, prohibiting women from competing with men for professional honors and for scientific attainments, are being broken down; so that even before the days of our generation are over, we may reasonably expect to find ladies, especially in the larger cities of the South, fulfilling the usual round of duties that belong to the educated physician. Many unprejudiced minds are already inquiring, "Why not?"

Causes of Prostitution, etc.

The *Times and Register* of July 12th says that during twenty years, 3,508 prostitutes were registered at Brussels, Of these, when asked their reason for living in this way. 1,523 attributed it to poverty, 1,118 to sexual appetite, 420 attributed their fall to bad company, 316 tired of hard work and little pay, 101 abandoned by lovers, 10 quarreled with parents, 7 left by husbands, 4 quarreled with guardians, 3 had family quarrels, 2 were compelled to prostitute themselves by their husbands, and 1 by her parents. Nearly all said they would only be too glad to work if work could be secured. One of the greatest difficulties was that the markets were flooded with the products of convents, which undersold the work of women who had to support themselves. The strict regulation of prostitution exercised a wholesome effect in deterring women from entering this life. Poverty in Belgium renders prostitution a hard necessity—the alternative being starvation.

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Diphtheria is More Prevalent

In some parts of West Virginia, Virginia, and North Carolina, than it has been for years. It is worth while for the physicians of families of children, especially, to be on their guard, and use, by spray or otherwise, such agents as are believed to be deadly to the germs of the disease. In this connection, it is worthy of remark that those physicians and families who have made free use of "Chloral-Thymol," as prepared by Mr. Hugh Blair, of this city, have conspicuously escaped having the disease. It may not be so thoroughly germicidal as bichloride of mercury, but it appears to be sufficiently so to render the mucous surfaces, etc., sprayed with it infertile soil for the disease, and it is not dangerous, as is bichloride of mercury.

Texas' Proposed Medical Examiners' Law

Has some peculiarities. It is proposed to grant to that State Board all the functions of a diploma-bestowing institution. Everybody who enters upon the practice of medicine in Texas, after the bill becomes a law, is to stand a satisfactory examination before the State Board of Examiners, to be composed of ten doctors, of whom one is to be a homœopath and one an eclectic. After the Board shall have been operative for two years, no one except a "Fellow of this College"—that is, one who has passed satisfactory examination before the Board—"will be permitted to testify in any courts of the State, or be employed by State, county, or municipality, as a physician." Further: "No charge for medical services can be collected by law unless the party rendering the service is a Fellow of the College, or unless the party charged has promised in writing to pay the same." Such a law would disqualify every practitioner now in Texas after two years' existence of the so-called "College," and we do not suppose the bill proposed will become a law.

Dr. I. S. Stone,

As may be seen by the change in advertisement on the white card-board, between pages 50 and 51 of advertising department, has closed his "Springdale Sanitarium," and has removed to 1309 H street, N. W., Washington, D. C., where he will receive patients as heretofore. His removal from Virginia causes a vacancy in the Medical Examining Board of Virginia, of which Board he was an efficient member. He leaves Virginia with the good wishes of all practitioners who had learned to value his skill and learning.

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Campho-Phenique

Is a true chemical combination of phenol and camphor, forming a concentrated, non-irritant antiseptic and vulnerary *local anæsthetic* or parasiticide, of exceedingly great use in minor surgery, gynæcology, obstetrics, dermatology, and in dental surgery. But it should be remembered that it is not miscible with water or glycerine, hot or cold, in any proportion; but when necessary to dilute it, use any bland vegetable, animal or mineral oil or fat. This preparation has become generally adopted by dentists of this city, and will be used by medical practitioners generally after once trying it. We state this after having used it ourselves. See advertisement of Phenique Chemical Company, advertising page 46.

Mr. E. R. Amis,

Representing the New York Pharmacal Association, and the Arlington Chemical Company, was in this city during October distributing samples among the doctors.

The Old Homestead,

Published in Savannah, Ga., has moved into its new building, which is a spacious and handsome one. It is only two years old, and yet has over 30,000 subscribers. It is published by the enterprising house of Davis Brothers, at $1 a year. It takes in a wide range in literary, scientific, artistic, musical, and fashion features, with pages for children, and notes for the household and farm. It is the only publication of the kind in the South. It gives monthly 40 pages, 11x15 inches in size.

The Queen Pays all Expenses.

The Queen's last "Free Trip to Europe," having excited such universal interest, the publishers of that popular magazine offer another *and $200 for expenses* to the person sending them the largest list of English words constructed from letters contained in the three words "*British North America.*" Additional prizes consisting of Silver Tea Sets, China Dinner Sets, Gold Watches, French Music Boxes, Portiere Curtains, Silk Dresses, Mantel Clocks, and many other useful and valuable articles will also be awarded in order of merit. A special prize of a Seal Skin Jacket to the lady, and a handsome Shetland Pony to girl or boy (delivered free in Canada or United States) sending the largest lists. Every one sending a list of not less than twenty words will receive a present. Send six U. S. 2c. stamps for complete rules, illustrated catalogue of prizes, and sample number of *The Queen.* Address *The Canadian Queen,* Toronto, Canada.

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RICHMOND, DECEMBER, 1890.

Original Communications.

ART. I.—Can we Diagnosticate Hyperæmia or Anæmia of the Brain and Cord?*

By WM. A. HAMMOND, M. D., of Washington, D. C.

No principle is better established to the satisfaction of all who undertake to seek for the truth, than that a series of sequential and logical circumstances, all pointing in the same direction, is more to be relied upon than an ocular demonstration. That is, it is more likely that a sense such as the eyesight will be deceived than that many facts, no one of which, perhaps, may be of any great importance, but all, when taken together, irresistibly leading to the same conclusion, should result in a false inference. We have only to go into any court of justice and observe a trial in which facts are presumably being set forth for the enlightenment of a jury, to perceive how witnesses, all of whom have been present when some important event has taken place, differ essentially in their testimony relative to the particulars of the occurrence.

One of the most striking illustrations of the fallibility of what is called ocular demonstration, is that contained in the following story related by Sir Walter Raleigh:†

* Read before the New York Neurological Society, October 7th, 1890.

† Quoted by Mr. S. Baring Gould, in "Curious Myths of the Middle Ages," London, 1869, p. 114.

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Sir Walter was in his prison composing the second volume of his history of the world. Leaning on the window-sill, he was thinking of the work before him, when suddenly his attention was attracted by a loud noise in the court-yard upon which his cell looked. He saw one man strike another, whom he supposed, by his dress, to be an officer. The latter, immediately drawing his sword, ran his assailant through the body. The wounded man then knocked the officer down with a stick, and fell dead upon the pavement. At this moment the guard arrived, first carried off the officer in an insensible condition, and then removed the corpse of the man who had been run through the body. The following day, Raleigh was visited by a friend to whom he related the event of the day before, which had occurred under his eyes. To his astonishment, his friend unhesitatingly declared that Sir Walter had entirely mistaken the whole series of incidents.

The supposed officer was no officer at all, but the servant of a foreign ambassador; it was he who had dealt the first blow; he had not drawn his sword, but the other had snatched it from his side, and had run *him* through the body before any one could interfere; whereupon, a stranger from among the crowd knocked the murderer down with his stick, and some of the foreigners, belonging to the ambassador's retinue, carried off the corpse. The friend of Raleigh added that the government had ordered the arrest and immediate trial of the murderer, as the man assassinated was one of the principal servants of the Spanish ambassador.

"Excuse me," said Raleigh, "but I cannot have been deceived, as you suppose, for I was eye-witness to the events which took place under my own window, and the man fell on that spot where you see the paving-stone standing up above the rest." "My dear Raleigh," replied his friend, "I was sitting on that stone when the fray took place, and I received this scratch on my cheek in snatching the sword from the murderer, and, upon my word of honor, you have been deceived in every particular."

Sir Walter, when alone, took up the second volume of his history, which was in MS., and, contemplating it, thought, "If I cannot believe my own eyes, how can I be assured of the truth of a tithe of the events which happened ages before I was born?" and he flung the manuscript into the fire.

But there are cases occurring every day of our lives in

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which positive evidence is not attainable, but in which reliance must be placed upon an aggregation of circumstances more or less complete in character. Many of these are familiar to the medical practitioner, and the symptoms by which he arrives at a conclusion are generally more subjective than they are objective. Let us suppose, for instance, persons suffering from an epileptic convulsion. The vertigo, the loss of consciousness, the turgidity of the vessels of the face and neck, the convulsive movements, the stupor, the headache, indicate to our minds great intra-cranial disturbance.

Is there any doubt that the deviation from the healthy standard is a congestion? We do not see the swollen vessels of the brain; we cannot possibly bring any one of our senses to bear directly upon the condition of that organ. We can merely judge by circumstances which we believe point unerringly to one definite conclusion. Vertigo, of itself, does not invariably indicate congestion; the lividity of the face is not alone sufficient; unconsciousness may be due to another, and, in fact, an opposite cause; convulsions may result from many different factors; stupor, or, at least, a condition resembling it, may be induced by various other states or influences; and headache, probably, has more distinct causes than any other cerebral symptom. But where we have vertigo, and facial lividity, and unconsciousness, and convulsions, and stupor, and headache, exhibited at the same time in one and the same patient; and when, in addition, we know that these symptoms disappear under the influence of remedies that observation, and experiment, and common sense demonstrate to us diminish the amount of intra-cranial blood, there is but one conclusion to be arrived at, and that is, that we are dealing with cerebral congestion. We cannot prove this by ocular demonstration, even if we had the opportunity of making a post-mortem examination, for though the patient should die soon after the occurrence of the fit, the vessels would have returned to their normal size, and nothing pathological would be discovered.

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I have, for many years, been familiar with a group of symptoms which, from their etiology and general characteristics, are indicative of cerebral disturbance; and some twenty-five years ago, after considerable observation and many experiments performed upon living animals and the human subject, I came to the conclusion that they are the result of an increase of the amount of blood circulating in the vessels of the brain.

My conclusions were published in an article on "Insomnia," in the *New York Medical Journal*, for May and June, 1865. This paper was subsequently enlarged and published in a separate form under the title of "Wakefulness, with an Introductory Chapter on the Physiology of Sleep." This little book was still further extended in 1869, in a volume entitled "Sleep and its Derangements." Afterwards, the subject was again elaborated in the chapter on "Cerebral Congestion," in my "Treatise on Diseases of the Nervous System," first published in 1871, and in eight subsequent editions. And still again in a monograph issued in 1884, entitled "Cerebral Hyperæmia the Result of Over-Mental Work or Emotional Disturbance," additional facts, the outcome of continued experience, were brought forward in support of the theory advanced.

If, during the last twenty-five years, I have become convinced of the truth of any one medical theory, it is the one which I propose to consider this evening. It is not the result of imagination, as one distinguished neurologist, in a recent lecture, asserts; neither do I think that I am an incompetent practitioner, as very broadly hinted at by another distinguished neurologist, whose position, though deservedly eminent, is perhaps not sufficiently exalted to warrant him in making, what I consider to be, a generalization, based upon an insufficient knowledge of the subject.

I know how difficult it is to establish a theory, even though the minds of those to whom we address ourselves are open to the reception of new ideas; but when they entertain theories of their own which, more or less, tend to obscure their perceptive faculties, the task becomes almost insuperable.

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Nevertheless, the truth generally prevails at last, even in the medical profession—that most conservative, and properly so, of all human organizations; so that I do not despair of having my more indiscreet antagonists eventually brought —if they live long enough—to a proper appreciation of the subject of cerebral hyperæmia; and I am quite sure that our worthy and distinguished President, the courtesy and ability of whose address on the subject I think I fully recognize, and whose receptivity of truth I have never failed to acknowledge, will ere long answer the question which constitutes the title of his discourse in an emphatic affirmative.

In my opinion, there are certain symptoms which positively indicate the existence of cerebral hyperæmia, and which I here designate as symptoms of the first class. There are others which inferentially lead us to the same conclusion, especially when they are associated with symptoms of the first class. These I shall embrace under the term symptoms of the second class. There are others indicative of derangements of various organs of the body—the heart, the stomach, the intestines, the kidneys, the generative system —which, though important as adding to the discomfort of the patient, may be due to many different primary pathological states, and therefore in the present discussion I shall not take them into further consideration.

The symptoms of the first class are, 1st, wakefulness; 2nd, pain, heat, a feeling of fullness or distension in the head, a sensation of a band encircling it, a dragging and clawing sensation at the vertex, vertigo, and hallucinations; *provided*, and (this is of essential importance), that these symptoms are increased by the recumbent posture, or a dependent position of the head; by any cause that impedes the return of blood from the brain, such as pressure upon the vessels of the neck, or by any factor that directly increases the amount of blood in the brain, such as intellectual exertion, certain kinds of emotional disturbance, or the taking into the system certain articles used as food or medicine; 3rd, a congested condition of the tympanum, and the optic disc, the retina, and the choroid.

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In regard to the first named of these symptoms, *wakefulness or insomnia*, I scarcely supposed it would be necessary to go again over the ground that I have so frequently traversed. Nevertheless, the observations which have been made by myself and others in regard to the direct association of insomnia with cerebral hyperæmia, appear to have been overlooked or disregarded by several neurologists, whose only justification in my opinion for their unbelief is the fact that they have not investigated the matter for themselves.

The theory which I have been to a great extent instrumental in establishing—that natural sleep is due to a comparative anæmic condition of the brain; normal wakefulness to an increase of the amount of blood in the cerebral vessels; and insomnia to an abnormal quantity of intra-cranial blood—is one which continued observation and experiment, as well as a larger experience, I believe, in the treatment of the disease in question, than that of any other physician (and I say this in no vain-glorious, or boastful spirit), entitles what I have to say on the subject to weighty and respectful consideration. It is not to be dismissed by *ad captandum* assertions of imagination and incompetence, or the proposal of obscure theories of lithæmia, or nervous prostration, or brain exhaustion, or neurasthenia, or any similar hypothesis which consists of mere words. If I am believed to be wrong, let those who disagree with me go over the ground for themselves; for unless they do so, I contend, with all due respect, that what they say upon the subject is of comparatively little value. I am not aware that a single opponent of the views that I have advanced relative to cerebral hyperæmia has made a solitary experiment upon a living animal or upon the human subject. Under such a condition of affairs, I think I should be fully justified in declining discussion, and I have heretofore avoided all controversy upon the matter; but I have such a high regard for our President, and am so fully convinced of his desire to get at the truth on every scientific subject, that I am willing to go over the points again, and to submit such additional

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observations and experiments as recent years have put at my disposal. I do this not only because correct ideas of the groups of symptoms under discussion are of great therapeutical importance, but also for the purpose of indicating to him the course I think he ought to pursue, in order to arrive at a just conclusion relative to the matter.

I do not propose to take up the time of the Society by pointing out the relations of all the symptoms I have mentioned to cerebral hyperæmia. I shall select a few which I think indubitably indicate the existence of this condition, and I am perfectly willing to let the truth or falsity of my views in regard thereto rest upon one single symptom, and that is, *persistent insomnia.* It is the necessary accompaniment, the pathognomonic symptom of the affection in question. Without wakefulness, there is no cerebral hyperæmia; with cerebral hyperæmia, there is always wakefulness.

My own experiments on the subject were performed sometime before those of Mr. Durham, but as his was published first, I have always gladly yielded him priority. There were some observations, however, made before Durham's experiments, and to these I desire briefly to draw attention.

Blumenbach* details the case of a young man eighteen years of age, who had fallen from an eminence and fractured the frontal bone on the right side of the coronal suture. After recovery took place, a hiatus remained, covered only by the integument. While the young man was awake, this chasm was quite superficial; but as soon as sleep ensued, it became very deep. The change was due to the fact that during sleep the brain was in a collapsed condition. From a careful observation of this case, as well as from the consideration of the phenomena attendant on the hibernation of animals, Blumenbach† arrives at the conclusion that the proximate cause of sleep consists in a diminished flow of oxygenated blood to the brain.

Dendy‡ states that there was, in 1821, at Montpellier, a

* *Elements of Physiology.* Translated by John Elliotson, M. D., etc. 4th edition. London, 1828, p. 191.

† *Op cit* p. 282, *et seq.*

‡ *The Philosophy of Mystery.* London, 1841, p. 283.

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woman who had lost part of her skull, and the brain and its membranes lay bare. When she was in deep sleep, the brain remained motionless beneath the crest of the cranial bones; when she was dreaming, it became somewhat elevated; and when she was awake, it was protruded through the fissure in the skull.

Among the most striking proofs of the correctness of the view that sleep is due to diminished flow of blood to the head, are the experiments of Dr. Alexander Fleming,* late Professor of Medicine, Queen's College, Cork. This observer states, that while preparing a lecture on the mode of operation of narcotic medicines, he conceived the idea of trying the effect of compressing the carotid arteries on the functions of the brain. The first experiment was performed on himself by a friend, with the effect of causing immediate and deep sleep. The attempt was frequently made, both on himself and others, and always with success. "A soft humming in the ears is heard, a sense of tingling steals over the body, and in a few seconds complete unconsciousness and insensibility supervene, and continue as long as the pressure is maintained.

Dr. Fleming adds, that whatever practical value may be attached to his observations, they are at least important, as physiological facts, and as throwing light on the causes of sleep. It is remarkable that his experiments have received so little notice from pathologists.

With the view of ascertaining by ocular demonstration the vascular condition of the brain during sleep, Durham† placed a dog under the influence of chloroform, and removed with a trephine a portion of bone as large as a shilling from the parietal region; the dura mater was also cut away. During the continuance of the anæsthetic influence, the large veins of the surface of the pia mater were distended, and the smaller vessels were full of dark-colored blood. The

* *British and Foreign Medico-Chirurgical Review*, Am. ed., April, 1855, p. 404.

† *The Physiology of Sleep—Guy's Hospital Reports.* 3rd series. Vol. vi, 1860, p. 149.

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longer the administration of the chloroform was continued, the greater was the congestion. As the effects of this agent passed off, the animal sank into a natural sleep, and then the condition of the brain was very materially changed. Its surface became pale and sank down below the level of the bone; the veins ceased to be distended, and many which had been full of dark blood could no longer be distinguished. When the animal was roused, the surface of the brain became suffused with a red blush, and it ascended into the opening through the skull. As the mental excitement increased, the brain became more and more turgid with blood, and innumerable vessels sprang into sight. The circulation was also increased in rapidity. After being fed, the animal fell asleep, and the brain again became contracted and pale. In all these observations the contrast between the two conditions was exceeding well marked.

To obviate any possible effects due to atmospheric pressure, watch-glasses were applied to the opening in the skull and securely cemented to the edges with Canada balsam. The phenomena observed did not differ from those previously noticed; and, in fact, many repetitions of the experiment gave like results.

Durham, in the next place, applied ligatures to the jugular and vertebral veins, with the effect—as was to be expected—of producing intense congestion of the brain, attended with coma. This last condition he very properly separates from sleep, which is never caused by pressure upon the veins. He likens sleep to the state induced by preventing the access of blood to the brain through the carotids, but does not allude to Fleming's researches on this point.

In 1854, a man came under my observation who had, through a frightful railroad accident, lost about eighteen square inches of his skull. There was thus a fissure of his cranium three inches wide and six inches long. The lost portion consisted of a great part of the left parietal and part of the frontal, occipital, and right parietal bones. The man, who was employed as a wood chopper, was subject to severe and frequent epileptic fits, during which I often

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attended him. In the course of my treatment, I soon became acquainted with the fact that at the beginning of the comatose condition which succeeded the fits, there was invariably an elevation of that portion of the scalp covering the deficiency in the cranium. As the stupor passed away, and sleep, from which he could easily be aroused ensued, the scalp gradually became depressed. When the man was awake, the region of scalp in question was always nearly on a level with the upper surface of the cranial bones. I also noticed on several occasions that during natural sleep the fissure was deeper, and that on the instant of awaking, the scalp covering it rose to a much higher level.

After my attention was thus drawn to this subject, I observed that in young infants the portion of the scalp covering the anterior fontanelle was always depressed during sleep, and elevated during wakefulness.

During the summer of 1860, I undertook a series of experiments with the view of ascertaining the condition of the cerebral circulation during sleep, of which the following is a brief extract:

A medium sized dog was trephined over the left parietal bone, close to the sagittal suture, having previously been placed under the full anæsthetic influence of ether. The opening made by the trephine was enlarged with a pair of strong bone forceps, so as to expose the dura mater to the extent of a full square inch. This membrane was then cut away and the brain brought into view. It was sunk below the inner surface of the skull, and but few vessels were visible. Those which could be perceived, however, evidently conveyed dark blood, and the whole exposed surface of the brain was of a purple color. As the anæsthetic influence passed off, the circulation of the blood in the brain became more active. The purple hue faded away, and numerous small vessels filled with red blood became visible; at the same time the volume of the brain increased, and when the animal became fully aroused, the organ protruded through the opening in the skull to such an extent that, at the most prominent part, its surface was more than a quarter of an inch above the external surface of the cranium. While the dog continued awake, the condition and position of the brain remained unchanged. After the lapse of half

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an hour, sleep ensued. While this state was coming on, I watched the brain very attentively. Its volume slowly decreased; many of its smaller blood-vessels became invisible, and finally, it was so much contracted that its surface, pale and apparently deprived of blood, was far below the level of the cranial wall.

Two hours subsequently the animal was again etherized, in order that the influence of the ether upon the cerebral circulation might be observed from the commencement. At the time, the dog was awake, and had a few minutes previously eaten a little meat and drank a small quantity of water. The brain protruded through the opening in the skull, and its surface was of a pink hue, with numerous red vessels ramifying over it. The ether was administered by applying to the muzzle of the animal a towel folded into the shape of a funnel, and containing a small sponge saturated with the agent.

As soon as the dog commenced to inspire the ether, the appearance of the brain underwent a change of color, and its volume became less. As the process of etherization was continued, the color of the surface darkened to a red purple, and it ceased to protrude through the opening. Finally, when a state of complete anæsthesia was reached, it was perceived that the surface of the brain was far below the level of the cranial fissure, and that its vessels conveyed black blood alone.

Gradually the animal regained its consciousness; the vessels resumed their red color, and the brain was again elevated to its former position. In this last experiment there did not appear to be any congestion of the brain. Had this condition existed, it would have been difficult to account for the diminution in bulk which certainly took place. There was evidently less blood in the cerebral tissue than there had been previously to the etherization; but this blood, instead of being oxygenated, was loaded with excrementitial matters, and consequently, was not fitted to maintain the brain in a condition of activity.

The following morning, the dog being quite lively, I removed the sutures which had been placed in the skin, covering the hole in the cranium, with the view of ascertaining the effects of chloroform upon the brain when introduced into the system by inhalation. Suppuration had not yet taken place, and the parts were in good condition. The opening in the skull was completely filled by the brain, and the surface of the latter was traversed by a great many

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small vessels carrying red blood. The chloroform was administered in the same way in which the ether had been given the previous day.

In a few seconds the change in color of the blood circulating in the vessels began to take place, but there was no sinking of the brain below the level of the chasm in the skull. On the contrary, its protrusion was greater than before the commencement of the experiment. There was thus, not only unoxygenated blood circulating to too great an extent through the brain, but there was very decided congestion.

The foregoing experiments were frequently repeated on other dogs, and also on rabbits, with like results. Within a short period I have in part gone over the ground again without observing any essential point of difference in the effects produced.

I have repeated Fleming's experiment on the human subject with Dr. Corning's instrument in several instances, and then sleep, or a condition resembling it, was instantaneously produced. As soon as the pressure was removed from the carotids, the individuals regained their consciousness. On dogs and rabbits, I have performed it frequently, and though, if the pressure be continued for longer than one minute, convulsions generally ensue, a state of insensibility resembling natural sleep is always the first result.

Some years since I had, through the kindness of my friend, Dr. Van Buren, the opportunity of examining a case which affords strong confirmation of the correctness of the preceding views. It was that of a lady in whom both common carotids were tied for a cirsoid aneurism, involving a great portion of the right side of the scalp. One carotid was tied by the late Dr. J. Kearney Rogers, and the other by Dr. Van Buren, several years previously, with the effect of arresting the progress of the disease. No peculiar symptoms were observed in consequence of these operations, except the supervention of persistent drowsiness, which was especially well marked after the last operation, and which, even now, is at times quite troublesome.

Another fact, showing that sleep is the result of a dimin-

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ished amount of blood in the brain, is afforded by what we observe in this respect during digestion. This process leads to sleep by drawing upon the brain for a portion of its blood. It is for this reason that we feel sleepy after the ingestion of a hearty dinner. A lady of my acquaintance is obliged to sleep a little after each meal. The desire to do so is irresistible; her face becomes pale; her extremities cold; and she sinks into a quiet slumber, which lasts fifteen or twenty minutes. In this lady the amount of blood is not sufficient for the due performance of all the operations of the economy. The digestive organs imperatively require an increased quantity, and the flow takes place from the brain—it being the organ with her which can best spare this fluid. As a rule, persons who eat largely, and have good digestive powers, sleep a great deal, and many persons are unable to sleep at night till they have eaten a substantial supper. The lower animals generally sleep after feeding, especially if the meal has been large.

Such observations and such experiments are, to my mind, conclusive proof that sleep, if not actually due to a diminished amount of blood in the brain, is inseparable from that condition, and that the reverse is equally true, that wakefulness is due to, or accompanied by an increased amount of blood in the brain. But we are not confined even to such evidence, conclusive though it be. By means of an instrument first devised by Dr. Weir Mitchell, of Philadelphia, (although I did not know of his priority when I brought my own apparatus forward before the New York Medical Journal Association in 1868), we can have ocular demonstration which ought to be sufficiently positive to satisfy every doubting Thomas who questions the possibility of determining the existence of cerebral hyperæmia. I obtained the idea of the apparatus from an allusion in the *Journal of Anatomy* to the fact quoted from *Virchow's Archives*—that Leyden had made some observations upon the movements of the brain and the blood pressure within the cranium by means of a manometer screwed into the skull.

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Briefly, the instrument consists of a brass tube, which is screwed into a round hole made in the skull with a trephine. Both ends of this tube are open, but into the upper is screwed another brass tube, the lower end of which is closed by a piece of very thin sheet India-rubber, and the upper end with a brass cap, into which is fastened a glass tube. This inner arrangement contains colored water, and to the glass tube a scale is affixed.

This second brass tube is screwed into the first, till the thin rubber presses upon the dura mater and the level of the colored water stands at O, which is in the middle of the scale.

Now, when the animal goes to sleep, the liquid falls in the tube, showing that the cerebral pressure has been diminished—an event which can only take place in consequence of a reduction in the quantity of blood circulating through the brain. As soon as the animal awakes, the liquid rises at once. The experiments were performed upon dogs and rabbits, and in every instance the pressure was lessened during sleep and was increased during wakefulness. Nothing can exceed the conclusiveness of experiments of this character.

Now, I think it is unquestionable that when we find a patient suffering from persistent insomnia, we are forced to the conclusion that he has a hyperæmic brain. So much for one symptom of the condition in question.

The *second group of symptoms* of the first class embraces pain, heat, sensation of fullness in the head, a feeling as if a band compressed it, a dragging, clawing sensation at the vertex, vertigo, and hallucinations increased by the recumbent posture, a dependent position of the head; by any cause that impedes the return of blood from the brain or that directly increases the amount of the blood circulating in the cerebral vessels. Without going into the full consideration of each one of these symptoms, it will be sufficient if I take up one of the most remarkable of the group—that is, hallucinations; and perhaps I can do this more effectually by citing a few cases from the recorded experience of others, as well as from my own practice.

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Brierre de Boismont refers to a case on the authority of Moreau, in which an individual was able to obtain hallucinations of sight by inclining his head a little forward. By this movement the return of blood from the brain was impeded, and the functions of the ganglia for vision were unduly exalted,

A similar case was not long since under my own care. A gentleman who had suffered from pain in the head, vertigo, and insomnia, with several other less notable symptoms of cerebral hyperæmia, one day, while sitting at his table writing, happened to raise his eyes from the paper without moving his head, and was astonished to see before him the figure of an old woman, with black cloak and hood. Throwing himself back in his chair in his amazement, he was again surprised to find that the image slowly disappeared; and as often as he repeated these movements, a like series of phenomena occurred. A few days afterward he repeated the circumstances to me, and, on examining him, I found that he wore a very high old-fashioned stock, which, as he sat at the table with his head bent forward, compressed the large veins of the neck, and prevented, for a time, the return of blood from the brain. On changing his neck-wear for other of more modern fashion, he was enabled to bend his head and raise his eyes without encountering the apparition.

An instance showing the influence of position in giving rise to false perceptions is given in *Nicholson's Journal:* "I know a gentleman," says the narrator, "in the vigor of life, who, in my opinion, is not exceeded by any one in acquired knowledge and originality of deep research, and who, for nine months in succession, was always visited by a figure of the same man threatening to destroy him at the time of his going to rest. It appeared on his lying down, and instantly disappeared when he resumed the erect position.

A gentleman who stands high as an author consulted me for a similar trouble. For several weeks he had been visited, just as he lay down, by the figure of a very old man, who stood by the side of his bed, grinning and beckoning to him with one finger. At first he was deceived, and start-

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ing suddenly from his bed, endeavored to seize his visitor, but he was gone before he could fairly stretch out his hands. He again lay down, and again the figure appeared. He reached out with one arm, and convinced himself that he could touch the very place where the image apparently stood, but he grasped nothing. He shut both eyes, and then each eye alternately, but it still remained. He was then entirely satisfied as to its real character, and so, like a sensible man, tried to get to sleep, but in this attempt he succeeded badly. He allowed this to go on for several weeks before he concluded to seek medical advice.

Dendy* mentions the case of a gentleman of high attainments who was constantly haunted by a spectre, when he retired to rest, which seemed to attempt his life. When he raised himself in bed, the phantom vanished, but reappeared as he resumed the recumbent posture.

The explanation of such cases is very simple. The recumbent posture facilitates the flow of blood to the brain, and at the same time tends, in a measure, to retard its exit. Hence, the appearances were due to the resulting congestion. As soon as the individuals rose in bed, or stood erect, the reverse conditions existed; the congestion disappeared, and the apparitions went with it.

I may also mention the case of a gentleman formerly under my professional charge, who suffered from cerebral hyperæmia as indicated by insomnia, vertigo, pain in the head, and great emotional disturbance, in whom all these symptoms were aggravated by the recumbent posture, and who could still further increase their intensity and cause the appearance of images by tying a handkerchief moderately tight around his neck, and there was one form which was always the first to come and the last to disappear. It consisted of a male figure clothed in the costume worn in England three hundred years ago, and bearing a striking resemblance to the portrait of Sir Walter Raleigh. This figure not only imposed on the sight, but also the hearing; for

* "*The Philosophy of Mystery*," London, 1841, p. 290.

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questions put to it were answered promptly and without incoherence.

Hallucinations of hearing are not infrequently produced by like causes. I had occasion recently to treat a lady suffering from epilepsy, and one of the means I advised for her relief was the wearing of an elastic band around the neck so as to compress the veins. After wearing it a few days, she complained of great fullness in the head and continual noises in the ears. Sometimes these were of a soft, moaning character, and at others like the hissing of a tea-kettle. I advised her, however, to persevere, which she did for another week, when she returned to say that she constantly heard voices singing all kinds of ribald words to familiar tunes. At first she had rather liked this, but it soon began to grow tiresome, and had kept her from sleeping. She had, accordingly, taken off the band and at once the sounds had ceased.

In another case, the patient, a young man, heard a voice whispering to him in the ear which rested on the pillow. When he turned over in bed, the voice at once disappeared, but in about a minute was heard in the ear which was then in contact with the pillow.

The influence of cerebral *hyperæmia* in *causing hallucinations* would, therefore, seem to be clearly established by actual experiment. Ferriar* wrote a treatise with the special object of proving that this is the only cause; but this is an extreme view, which cannot be sustained, for, as we well know, the very opposite condition, cerebral *anæmia*, may give rise to them in a very marked degree.

Hence, there is a large group of symptoms in addition to wakefulness, which, under certain conditions, lead irresistibly to the conclusion that a hyperæmia of the brain exists.

Perhaps no point connected with the subject of cerebral hyperæmia has evolved more discussion and provoked more opposition than my assertion that its existence can be shown by the ophthalmoscope. I am free to confess that I was in

* "*An Essay Toward a Theory of Apparitions*," London, 1813.

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error, inasmuch as I attached too much importance to the use of this instrument. The state of the retina and choroid, whilst, in many cases, indicating the presence of an intra-cranial congestion, does not always do so. But I am very sure that there is often an intimate relation between these tissues and the brain, and that enlarged retinal and choroidal vessels do frequently exist in conjunction with the symptoms which I have specified as demonstrating the presence of cerebral hyperæmia. With all due respect to the accomplished body of ophthalmologists, I do not believe that they are competent judges in this matter. Conditions which are present, and which they are accustomed to see without there being any accompanying derangement of vision, are regarded by them as being perfectly normal. It is not many years ago that one of the most eminent ophthalmologists in the country pronounced the eyes of the general paralytics, in one of our largest lunatic asylums, to be perfectly healthy, whereas no fact is now more generally recognized than that there are almost invariably, in such patients, deviations from the healthy standard. Moreover, there are eminent ophthalmologists who do admit that the fundus of the eye often gives evidence of the existence of intra-cranial hyperæmia.

That the tympanum also responds to the condition of the brain, as regards its blood supply, is a fact which was established several years ago by the experiments of Dr. Roosa and myself; and I find it very generally congested in those patients who exhibit the other evidences of cerebral hyperæmia.

I do not mean to be understood as saying that there is a fixed condition of the fundus of the eye and tympanum, which is associated with cerebral hyperæmia. Observation should be made from day to day in each case, and then it will be found that as the other symptoms of cerebral disorder disappear, the retina, the choroid, and the tympanum, lose their congested appearance, and that, when health is restored, the fundus of the eye and the drum-head are found to be very different from what they were when the disease

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was at its height. I am afraid that there is so much in this division of my subject that I should run the risk of wearying you, should I, at this time, undertake to consider cerebral anæmia, and congestion, and anæmia of the spinal cord. At some future time, should occasion offer, I will gladly take up these important points. For the present, I shall refer you to what I have already written in regard to them, while I ask you to apply the principles and facts for which I have contended this evening to the other abnormal conditions.

There is one other matter, however, which is so important in leading us to a correct diagnosis of cerebral hyperæmia, that I must beg for a few additional moments.

There are certain agents which, by their action, appear to increase the amount of blood in the brain, and others which apparently diminish it, and which are hence important in their diagnostic relations. Take, for instance, a patient who is suffering from insomnia, pain in the head, vertigo, and hallucinations, and other symptoms of cerebral hyperæmia, and give him one or two hundredths of a drop of *nitro-glycerin*. In a few minutes the headache becomes intolerable, the heat of the head is increased, vertigo becomes insupportable; if there are hallucinations present at any time, they are at once developed; if the administration takes place at a time when he cares to sleep, wakefulness becomes more strongly marked, and his whole condition is rendered more intolerable. Like effects follow from genuine *strychnia* and other agents. I have had under my care many persons suffering from the symptoms I have mentioned, who, having been treated by some of these remedies under the theory that they were suffering from nervous prostration, or nervous exhaustion, or some other hypothetical condition, and who, when treated according to the principles I have laid down this evening, have at once begun to mend, and who have, in a short time, regained their normal health.

Among the agents upon which the greatest reliance can be placed, the *bromides* stand pre-eminent. Permit me

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to quote from the "*Memoir on Sleep and Insomnia*," printed in the *New York Medical Journal* for June, 1865, premising that what is there said of the bromide of potassium is equally true of any other of the bromides in common use.

"Bromide of potassium can almost always be used with advantage to diminish the amount of blood in the brain, and to allay any excitement of the nervous system that may be present in the sthenic form of insomnia. That the first-named of these effects follows its use, I have recently ascertained by experiments upon living animals, the details of which will be given hereafter. Suffice it now to say that I have administered it to dogs whose brains have been exposed to view by trephining the skull, and that I have invariably found it to lessen the quantity of blood circulating within the cranium, and to produce a shrinking of the brain from this cause. Moreover, we have only to observe its effects upon the human subject, to be convinced that this is one of the most important results of its employment. The flushed face, the throbbing of the carotids and temporals, the suffusion of the eyes, the feeling of fullness in the head, all disappear as if by magic under its use. It may be given in doses of from ten to thirty grains, the latter quantity being seldom required, but may be taken with perfect safety in severe cases."

We have another diagnostic fact in the action of *ergot*. As is well known, this substance possesses the property of constringing the organic muscular fibre. This power has, for several years past, led to its successful application to the treatment of those diseases of the spinal cord in which it is desirable to lessen the amount of blood in its vessels. It is only lately, however, that this agent has been employed in similar affections of the brain. From my own experience, as well as from a consideration of the investigations of others, I am entirely satisfied that ergot does contract the cerebral vessels, and hence that it diminishes the quantity of intra-cranial blood. Among the first, if not the very first, to call attention to this property was Dr. Charles Al-

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dridge,* who noticed that after the administration of a full dose he found it to cause "contraction of the arteries of the retina and loss of the capillary tint of the disk." My own observations are entirely in accord with these results. I have repeatedly found a single dose of two drachms of the fluid extract produce a decided diminution in the calibre of the retinal arteries, and a marked pallor of the disk.

In addition, some recent experiments which I have performed upon dogs, in which the ergot was administered hypodermically in doses of from one to three drachms of the fluid extract, after the animals had been trephined and the cephalo-hæmometer inserted in the opening of the skull, showed, from the falling in the tube, that the intra-cranial pressure was notably lessened.

I should like, if there were time, to call attention to the results which are obtained by the use of thermometers applied to the scalp, and by Lombard's thermo-electric differential calorimoter, but I must content myself with referring to what I have already published on this point.

The symptoms belonging to the second class, such as intellectual and emotional disturbance, morbid fears, various sensorial derangements, etc., need not detain us at present. Their connection with cerebral hyperæmia rests, though perhaps less directly, upon the same evidence that has already engaged our attention.

I have only to say, in conclusion, that when I have a patient suffering from insomnia, pain in the head, vertigo, hallucinations, suffusion of the face, cephalic heat, and other striking symptoms of, perhaps, less special importance, and when I find that these symptoms disappear under the influence of remedies such as the bromides, ergot, ice, and douches of cold water to the nape of the neck, cups in the same locality, nasal blood-letting, or spontaneous hæmorrhage, position, and other means calculated to diminish the amount of intra-cranial blood, I do not see how an escape is possible from the conclusion that the patient suffers from

* "*West Riding Lunatic Asylum Reports*," Vol. I, p. 71, London, 1871; also Vol. III, p. 230.

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cerebral hyperæmia. And I protest that it is not true science to dispute these results on mere theoretical grounds, or to bring forward in explanation theories which have nothing whatever to support them. I think that many years' practical experience, during which I have treated thousands of patients according to the principles laid down this evening, and have taught them to thousands of medical students and medical practitioners, during which time I have promulgated them in more than a score of books and monographs, which have been translated into nearly every language of the civilized world, give me a right to something more than mere dogmatic denial, and certainly should shield me from the charge of incompetence, or a too fertile imagination.

Art. II.—The Plaster-of-Paris Portable Bed, used in Treating Disease of the Hip-Joint, and Potts' Disease of the Spine in Children.*

By A. M. PHELPS, M. D., of New York, N. Y.

Professor of Orthopædic Surgery, University of the City of New York; Post-Graduate School and Hospital; Professor of Surgery, University of Vermont; Surgeon to Charity Hospital, etc.

To avoid a long confinement in bed, in the treatment of hip-joint and Potts' disease of the spine in children, I devised the plaster-of-Paris bed and published the same in the *New York Medical Record*, of May 4th, 1889; also in the *Transactions of the New York State Medical Society*, February 3d, 1889. A description of the same, together with the cuts, will be found in Bradford & Lovett's work on "*Orthopædic Surgery.*"

I am pleased to listen to the description of a plaster-of-Paris bed by my friend, Prof. Lorenz, of Vienna. We have passed through several phases of plaster-of-Paris beds in New York, and I think he will find, as we have, that it is

*The discusson of Prof. Lorenz' paper on the plaster-of-Paris bed, at the Tenth International Congress, Berlin, 1890.

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absolutely necessary, in lumbar Potts' disease in patients confined in portable beds, to fix the legs as well as the spinal column. The flexor muscles of the thigh, arising from the lumbar spine, are a source of motion when the limbs are moved. Our first beds were made without the legs, but it was found that, in disease of the lumbar spine, the cases did not do so well as those fixed in the long portable bed.

The technique of the construction of Prof. Lorenz' bed is interesting. The ordinary portable bed should be padded, so as to accomplish the same purposes urged by Prof. Lorenz.

My first beds were made of wood. I afterward made the plaster-of-Paris bed with wood, which seems to meet every requirement, the wood making the bed strong without adding to its weight. The jury mast (Fig. 1) is added only in spinal caries extending high up in the spinal column. The difference in the length of the limbs, for the purpose of counter-extension, is made only in beds used for hip-joint disease. (Fig. 2).

A board is cut to correspond to the length and two-thirds of the width of the child, (Fig. 2). This is carefully padded. The child is now laid on the board and enveloped with a plaster-of-Paris bandage from the feet to the axilla, to a thickness of three-eighths of an inch. When the plaster is set, the front is cut away. This bed can now be lined and a front put on it and lacings put in, or the child can be held in place by means of bandages. As the plaster bandages are rolled on, they should be *nailed to the edges of the board*, thus making the board and plaster one. This bed will be found to fit better, be much lighter, and more convenient to make than the wood cuirass. Extension in hip-joint disease is made to the foot-piece, and lateral extension by cutting away the side a little and putting in a staple (see Fig. 3), to which the bandage is tied.

The portable bed possesses nothing superior to the wire cuirass to recommend it, only its cheapness, costing, as it does, about three dollars; and then a skilled mechanic is

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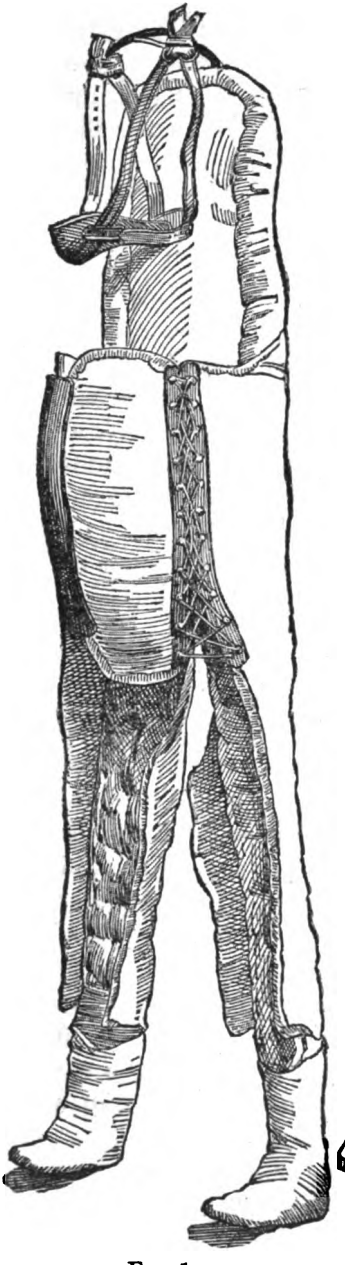

FIG. 1.

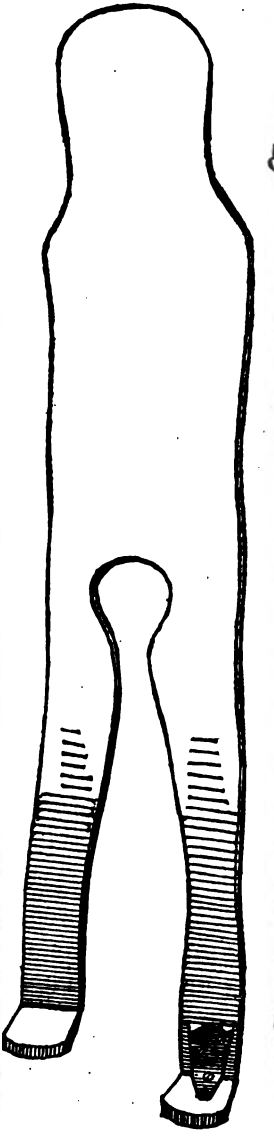

FIG. 2.

FIG. 3.

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not required; any practitioner would be equal to the task. This will enable the mother or nurse to carry the child about, and the hip-joint or spine is perfectly immobilized by fixation. In hip-joint disease, the bed restricts the normal movements of the joint. The lateral extension, combined with the longitudinal, makes traction upon the joint in a line corresponding to the axis of the neck of the femur. (Fig. 3).

ART. III.—Some Original Observations on Chronic Cystitis in the Male, with Especial Reference to Pathology and Treatment.

By HUGH T. NELSON, M. D., of Charlottesville, Va.,

LATELY PRESIDENT OF MEDICAL EXAMINING BOARD OF VIRGINIA; INSTRUCTOR IN CLINICAL SURGERY IN UNIVERSITY OF VIRGINIA, ETC.

Before undertaking the diagnosis of any given pathological condition, it must be definitely determined what constitutes the *departure* from the normal condition of the organ or organs supposed to be the seat of such departure from the normal.

The suffix *itis*, so long employed by medical and surgical writers to denote *inflammation*, still conveys to the student of pathology the idea of proliferative changes in the morphological components of any given tissue, the subject of abnormal vital action, taking place in the direction indicated. These proliferative changes vary greatly, however, in essential processes as well as in ultimate results; a certain causal condition, modified or not, always standing in direct relation to the final result.

Changes in tissue structure, under one set of conditions, will result in destruction of the tissue and the formation of a substance, chemically and morphologically, at variance with the existence of any and all known forms of tissue endowed with healthy vital force. Under another set of conditions, the given tissue may give place to a formation of a character consistent with the continuance of the vitality of the part, though morphologically different from it.

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Under yet other conditions, the normal tissue, subject to agencies causative of proliferative changes, may be the seat of formation of new tissue of a character with its own, but variously modified.

These several proliferative changes take place under the influence of agencies from without, and destruction of normal tissue results; or, when protected from these external forces, in the direct line of formation of the normal tissue, but with lack of proper controlling nerve force, and resulting in a modification of the same.

Thus the pathologist must study inflammatory processes under several heads: (1) When resulting from the invasion of the tissue by microbian influences; (2) When reparative action goes on in an injured organ apart from any such invasion, directly in line of the reformation of the normal tissue or tissues of such organ; and (3) When this reparative action goes on indirectly in the line of reproduction of the normal tissues, but so modified by inherent (?) causes as never to effect a perfect result.

Cystitis, the term applied to changes in the urinary bladder, is to be studied accordingly as it depends on (*a*) the invasion of the organ by specific agencies from without; (*b*) the changes and their results, as observed in it under the influence of agencies originated in the organism outside the bladder; or (*c*) in the bladder itself.

Chronic cystitis is to be studied as the *secondary* result of the changes having origin in *a*, always being *acute* at first, and as the *direct* result of changes referred to under *b* and *c*, subacute from the first, and recognized as such.

The *diagnosis of chronic cystitis* is generally easily and quickly made, and with accuracy. One enters a room, and as the door opens the alkaline odor of decomposing urine strikes, with sickening effect, upon the rich nerve-supply of the Schneiderian membrane. This will be the case no matter how scrupulous the cleanliness of the apartment and its occupant, nor how assiduous the care and attention of all interested. In all probability, before salutations have been exchanged the *old* man will rise from his couch as rapidly

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as possible, and, with eager fingers, unfasten the buttons of his trousers, seize the urinal, and, stooping over, make violent and straining efforts at micturition. One might expect a full and free gush of urine, to be followed by a comfortable disclosure of an endless array of subjective symptoms. But no. The man's physiognomy, his attitude, the manner in which he holds and tugs at his penis, are all indicative of intense pain and a desire to accomplish what seems almost impossible. A minute or more may elapse, a scanty dribbling of a few drops of muco-purulent or muco-sanguinolent urine is observed, probably followed by a few lumps of inspissated material resembling soft cheese, covered with mucus spotted with specks of blood. The pain is not yet relieved, and it is with difficulty that the sufferer can be induced to put aside the urinal and replace the painful organ. Even in doing this, the front of his shirt and his drawers, though recently put on in spotless cleanliness, are seen to be stained by the ooze which, in small amount, completes the retarded act of urination. The pain gradually subsides, and the detail of his suffering, frequency of urination, and small amount of urine voided, largely consisting of blood and slime, is being given; but even before the recital has been completed, the same tragic scene is re-enacted, and the almost exhausted sufferer craves the help he so much needs.

If one has carefully observed the act of urination described, he will have noticed several important points: 1st. The length of time between the access of the desire and the beginning of its accomplishment; 2nd. The first few drops of urine are, comparatively speaking, clear, and dribble away, while almost immediately, under the influence of violent effort, a jet of thick, discolored, almost semi-solid material is forced some distance from the urinary meatus, and the act appears at an end; 3rd. After the penis is at rest, and the pain which preceded and accompanied the scanty discharge begins to subside, there is a leaking of sanious mucus or muco-pus from the urethra, which is either shaken on the surroundings from the penis, or allowed to dribble

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away for several seconds, and soil the clothing or bedding or both; and 4th. The exceedingly small quantity voided, when taken in connection with the intensity of the desire, and the accompanying pain. Again, there is to be observed the frequency with which urination is attempted—many patients with chronic inflammation of the bladder having been known to go through the performance of the act more than one hundred times in the twenty-four hours.

Palpation of the supra-pubic region reveals tenderness, but no enlargement; catheterization shows that there is little or no urine in the bladder, and one is surprised that the viscus itself is so slightly sensitive to contact of the sound, though the urethra is almost unbearing of instrumentation, and any attempt at the introduction of either catheter or sound produces an almost uncontrollable desire to urinate. Again, one is surprised to find that the endoscope reveals little or no redness, injection, or thickening of the mucous lining of the urethra.

Digital exploration of the rectum, the sound remaining in the bladder, reveals a uniform thickening, often very considerable, of that portion of the organ in reach of the examining finger; and although the sound in contact with its inner surface is productive of little or no pain, the pressure of the finger is torturing in a great degree. The prostate gland may or may not be enlarged; enlargement, if found, may be either simply hypertrophic or inflammatory. The sensitiveness will indicate inflammatory enlargement; whereas, if the hypertrophy be a normal one, firm pressure elicits, comparatively speaking, little pain. Stricture of the urethra may have been encountered in attempting exploration of the bladder, and, more frequently than any other known condition, stands in causal relation to chronic cystitis in the male, which relation will be fully explained in discussing the *pathology* of the disease. The sound, after entering the viscus, may reveal the presence of stone; and either with or without this a rugose condition of the mucous membrane, even when the bladder is fully distended, is generally to be observed. The urine is found in small

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quantity, unless there be non-inflammatory hypertrophy of the prostate, in which case often a large quantity of so-called *residual urine* is drawn with the catheter. The urine is found more frequently *alkaline* than *acid*, though it can be presently shown that in the earlier stages of chronic cystitis an acid condition of the contents of the bladder is to be observed in one class of cases. Shreds of mucus, in variable quantity, are always visible to the unaided eye, and the urine, on standing, always deposits an amorphous substance consisting of this mucus, cells, and salts. These cells may be pus, or simply dead white corpuscles and epithelium; and the salts may be phosphates, or urates, uric acid, or the morphous salts.

We are frequently, however, surprised to find to what a small extent the urine varies from the normal in some cases of chronic cystitis, especially those coincident with the formation of uric acid calculi. Should a case of chronic cystitis have been of considerable continuance as regards time, or, even in its earlier stages, should the pre-existing acute inflammatory condition have been of extraordinary severity, there will undoubtedly be present symptoms of commencing nephritis, which can be easily diagnosticated. The importance, therefore, of an early diagnosis cannot be overestimated, since upon this must depend the treatment and prognosis—the latter being much more grave, and the former more difficult, should the kidneys have become involved to any extent.

The differentiation, therefore, between acute and chronic cystitis becomes important, and the history of the case is the main feature by which one is to be guided. For instance, should there be present an acute urethritis when attention is called to the cystitis, or should the attack be found to have followed catheterization for retention of urine, or use of *sounds*, etc., for urethral dilatation, irritating injections for *gleet*, spermatorrhœa, etc., an acute affection is to be diagnosticated, which, however, may rapidly pass into the chronic affection, or, soon after an apparent cure, may

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leave a subacute inflammatory condition, rapidly becoming chronic.

Cystitis in persons, never subjects of any of the foregoing conditions or treatment, may be safely put down as chronic from the beginning, and generally due to causes originating in the body of the person affected.

Age bears no relation in the diagnosis of chronic cystitis, and cases are on record of male infants troubled with the affection at birth—these cases following the formation of intra cystic concretions.

Finally, the *morbid anatomy of acute cystitis* is entirely its own, the disease involving essentially the mucous tissues of the bladder, ureters, and kidneys, and even sometimes ending fatally before the tissues involved in the chronic disease become at all affected. Or, to be more plain, *chronic cystitis* must be considered as beginning as those tissues of the bladder other than its mucous membranes become the seat of proliferative changes; and it must be admitted that in cases following upon the acute disease, a line of demarcation cannot be accurately drawn between the two affections.

The fact that of late years supra-pubic incisions are freely and safely made into the male bladder gives excellent opportunity for the study of the pathology of the diseases of that viscus; and it is a matter of surprise that investigations in this direction have not already been more carefully made.

One who has observed the macroscopic appearance of the inside of a healthy bladder, and then of one affected with chronic cystitis, has been forcibly impressed by the difference between the viscus in either case; though it will be shown that in some cases, in which many of the symptoms of chronic cystitis are present, the mucous membrane appears as normal to the unaided eye. The inner surface of a healthy male bladder is smooth, and in the living subject presents almost a metallic lustre, falling into folds when its contents are removed, and having a crumpled appearance. The line of incision shows that the walls of the viscus are thin, and the layers of different structure, constituting its

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several coats, cannot be separated except by great care and the aid of a lens of considerable power. These coats are from within, outwards—mucous, submucous, muscular and peritoneal (in part), and a brief account of them, as observed in a natural state, will throw light upon the pathology of the disease under consideration.

The *mucous coat* consists of several layers of epithelial cells, which are neither *columnar* nor *squamous;* though that lining the follicles and glands is of the columnar variety, and the deeper layers more nearly approach this variety over the whole extent of the viscus—the maceration of the layers in more immediate relation with the free internal surface, probably accounting for the difference in form. Beneath, or external to the epithelium, the mucous membrane is composed of a homogeneous structure, in which are to be found imbedded follicles and glands, the latter being more numerous about the constricted portion of the organ just posterior to the prostate gland. Many free cells are found in this homogeneous sub-epithelial structure, and it is very rich in its vascular supply. The mucous membrane of the bladder is continuous with that lining the ureters and the pelvis of the kidneys.

The *submucous or cellular coat* consists of an aggregation of areolar tissue connecting together the muscular and mucous coats, and so intimately connected to the latter as to render its separation from it very difficult. With this exception, there is little to mark it as in any way peculiar, or differing from tissues which serve as connecting media in other situations.

The *muscular coat* has its fibres arranged in such a manner as that they both furnish constricting and sphincteral power, and may be compared to the arrangement of the figure of eight threads of a bobbin of seine-thread wound upon a stick—the urachus representing one end of the stick, the prostatic urethra the other. The sphincter is formed by the shortening of the loops around the urethra, so that in this situation their direction is in a plane more or less perpendicular to the lumen of the urethra, while they are

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nearly parallel to the axis of the bladder as they pass on to be reflected in various situations in the neighborhood of the urachus. The general arrangement may therefore be compared to that of the muscular fibres of the heart.

The *peritoneal* or *serous coat*, if we consider the bladder as containing twelve ounces of water, and to have been pushed up out of the pelvis by a rectal bag of the same capacity full of air, covers less than *three-fifths* of the surface of the viscus, about *two-fifths* anteriorly, and *one-fifth* posteriorly. It is a reflection of the general abdominal peritoneum upon the body of the bladder; but in addition, it forms the so-called false ligaments. Nor does it in any situation, save where it is reflected on to the bladder from the anterior abdominal wall, have any more interest in chronic cystitis than elsewhere when in close relation to viscera, which may be the seat of inflammatory processes.

Chronic cystitis, dependent on causes originating outside the body of the person subject of the disorder, is invariably a sequel of an acute attack, dependent either on gonorrhœal infection, or infection by the break of a dirty catheter—the latter, even in the hands of a skilled manipulator, being a fruitful source of acute cystitis.

An *acute cystitis* set up under the influence of the gonococcus, finding its way backward along the urethra into the bladder, is of frequent occurrence, and its pathology is pretty much the same as that observed in pus-formation elsewhere. In fact, the presence of various micro-organisms is to be detected in these cases, and verifies the statement made.

The gonococcus, with his companions, penetrates the superficial layers of the epithelium, and gradually invades the deeper layers and the submucous structure. An intense hyperæmia prevails, and white corpuscles flock to the points invaded by the micro-organisms. The rapid multiplication of the different cocci and the proliferation of the sub-epithelial cellular elements under the influence of an increased blood supply, causes a displacement of the epithelium; and a profuse outpouring of serum loaded with dead leucocytes,

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each swarming with bacteria, takes place. Hyperplasia of all the coats of the viscus rapidly takes place, and soon the inflammation is at its height.

Usually under some forms of treatment, or by the efforts of nature, when the micro-organisms seem to have spent their force, the process seems checked, and a new mucous membrane is formed. That this is by no means always the case, is evidenced by the fact that many cases of chronic cystitis, ureteritis, pyelitis, pyelo-nephritis, and nephrosis, are directly observed to follow in the wake of an acute gonorrhœal infection, and this is frequently the case where the acute state of cystitis was of such slight severity as not to have required medical treatment.

Here the proliferative process, by which restitution of the cystic epithelium is attempted, is not perfect, and an aborted mucous membrane is seen in many points. The glands are tumefied and their capsules thickened, and the basement membrane underlying the epithelium has become thickened and loaded with cells, in which there may or may not be micro-organisms. If micro-organisms are found, it is probable that their rapid proliferation in the acute stage has impaired their power for harm, and though they still continue to work, they do so slowly, and rather at the expense of the deeper structures than of the epithelial coats of the viscus.

In prostatic hypertrophy and urethral stricture, however, the viscus is generally much enlarged, though its walls are thickened, and in that form of cystitis accompanying enlarged prostate, there is always a sagging down of the base of the bladder forming a regular cul-de-sac, a receptacle for so-called residual urine. The hyperplasia here exists chiefly in that portion of the viscus lying below and behind, which is devoid of peritoneal investment. The muscular fibres are enormously hypertrophied, and the bas-fond presents to the touch the feeling of cicatricial tissue lying beneath the mucous membrane. The ureters become enlarged, as do, ultimately, the cavities of the kidneys itself. Finally degeneration of the kidney tubules themselves, as well as of the Malpighian tufts takes place, and death may result; the

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mucous surface of the bladder remaining in a nearly normal state, unless some infection from without has gained access to its interior by improper instrumentation.

We do, however, find the epithelium absent in spots, showing the sub-epithelial layer congested and bulging into the cavity of the viscus. These ecchymotic spots are to be seen underneath the epithelial layers, or effusions in the substance of the epithelium itself. The mucus is continually being poured out, and ammoniacal decomposition of the urine occurs, instituted by the presence of the *micrococcus ureæ*. Of course the terminal nerve fibres are subject to irritation; the net work of muscle fibres takes on action similar to peristalsis at first, and then their contractions become more lasting. The substance of the muscle fibre itself enlarges and becomes more powerful, though degenerative changes ultimately take place. But before degeneration takes place, and while the contracting power of the muscle fibres is still great, lymph-corpuscles (leucocytes) and serum are poured out into the substance of the submucous coat under the influence of the continuing hyperæmia. These cells are still capable of forming organized tissue, and actually do so. The doubling up of the two inner coats of the bladder into folds parallel to its longer axis produced by the contracture (so to speak) of its muscular coat, offers a loose cellular interspace between this coat and the mucous coat; and the effusion, naturally following the line of least resistance, takes place into the pouches formed by the inward projecting folds; and a series of ridges, more or less firm, as the organization of the new, though imperfect tissue takes place, is to be observed.

Thus a small, contracted bladder is formed, with its walls many times thickened, and rendered almost indistensible; the process involving ultimately the intra-muscular substance, pushing the peritoneal coat farther away from the mucous, and involving the areolar tissue, which lies around that portion of the viscus destitute of peritoneal investment.

It is easy to see the effects which such a series of changes

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must produce in the terminal nerve fibres of this or any other organ. The pressure exerted upon their delicate structure by the cicatricial character of the new formation, to say nothing of the irritation to which they are subjected at the points where the epithelium of the mucous membrane is wanting, and where they are in contact with decomposing urine, mucus, desquamated epithelum and blood will easily account for many symptoms detailed above, as well as for many of the reflex phenomena so often observed—as the pains in the thighs, end of penis, etc. The termination of the nerve filament is actually strangulated, and cell after cell within the neurilemma takes up the story of its wrongs until the whole system cries out and manifests its indignation.

The presence of blood, either as hæmorrhage in great or less amount, or as minute specks flecking the aggregations of mucus, etc., is due to rupture of the capillaries and arterioles when the epithelium is removed, and support to their walls thus taken away. The epithelium itself, being more or less imperfect as the result of incomplete resolution of the original inflammatory process, and being in contact with the products of decomposition, is macerated, and the individual cells altered in structure and enlarged, are shed off, and their places substituted by others yet more imperfect; and in many places the several layers are shed as a whole, and the basement membrane even dissolved away, urinary infiltration into the perineum frequently taking place in this manner.

The orifices of the ureters become necessarily involved in this process, and the disease, by gradual extension, reaches the hilum and pelvis of the kidney, and finally the kidney itself becomes the seat of degenerative or other changes, even though it may have enjoyed perfect immunity from invasion by the acute infection. Nor is it at all improbable that, after ammoniacal decomposition has set up under the influence of the *micrococcus ureæ*, which has been actually isolated, and from which cultures have been prepared capable of decomposing urine and liberating ammonia—the other

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micro-organisms regain a new potency, and rapid destructive suppurative processes set up along the whole genito-urinary tract. This supposition becomes a tenable theory in view of the fact that the same observer will fail to find the gonococcus in the recent urine of a person affected with chronic cystitis, and yet either he, or some other observer, will subsequently find that the pus from the same subject suffering from a pyelo-nephritis is swarming with these micro-organisms. The mode of access, however, of any form of bacillus to the bladder of one suffering with a chronic cystitis, even in its earlier stages, is easy. The clothing, prepuce, and glans penis, must necessarily be, to some extent, contaminated by the drying cystic evacuations; the urethra itself must contain portions of shreds of mucus and desquamated epithelium. "Broad is the way, and many there be which go in thereat."

But it cannot be asserted in the light of more recent investigation, that inflammatory processes necessarily involve the finding of bacteria. Dr. Harold C. Ernst, Demonstrator of Bacteriology in Harvard University, in an article on "*Bacteriology*," written for the "*Annual of the Universal Medical Sciences*" for 1889, cites Charrin, who reports observations made after inoculating rabbits with the *bacillus pyocyanis*, "that very shortly the organisms disappeared, whilst the renal disturbances continued and finally produced death, at which time careful cultures failed entirely to show the presence of any bacteria. In other words, the infection had ceased, whilst its consequences remained. He claims the same analogy in the case of human beings—there is infection and intoxication; an attack of scarlatina terminates, one of diphtheria ends; but a nephritis or paralysis is often established, and one seeks in vain at this time for the micro-organism which was originally present and started the perverted growths of the cell-tissues."

We now must examine into the departure from the normal in those cases of chronic cystitis which have their origin within the organism of the individual affected, and the steps of the process constituting the deviation. The only

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difference to be observed is that seen in the mucous coat. As belonging to the cases of chronic cystitis, mention is to be made of the affection as incident to the existence of calculous concretions, urethral stricture, spinal injury and enlarged prostate. Of cases of chronic cystitis accompanying the formation of vesical calculi, there are two classes: those found with alkaline concretions, and those with acid stone. These are always subacute from the first, the symptoms becoming more intense as the disease advances.

The departure from the normal in cases of *phosphatic calculi*, is an excessive alkalinity of the blood. The renal excretion loses its natural acidity as a result, and the phosphates being in excess of what the urine can hold in solution, are free, and lie as sediment in the more dependent part of the bladder. It is a matter of statistical result that phosphatic calculi are the kind of concretions met with in the bladders of old men. Here the habit of "holding the water" has been formed, or the prostate is enlarged, or at some time previously, a *gravel* (uric acid) has descended from the kidney. This acts as a nucleus for the aggregation of phosphatic sediment and mucus; or, in some other way, the phosphatic sediment is agglutinated by the colloid materials in the bladder (mucin, etc.,) and the stone is formed. Accretion goes on, and soon the concrete mass becomes an irritant. Either with or without the access of some form of micro-organism, all the steps of chronic cystitis as observed to result secondarily from gonorrhœal infection, are gone through with, and the same ultimate produced. One who has observed the inside of a bladder containing a non-encysted phosphatic calculus, will be struck with the dirty, filthy appearance which it presents—a typical case of chronic cystitis.

The concretion has rubbed away some of the epithelium in the earlier stages of its formation, irritation of nerve terminals has been set up, active hyperæmia follows, accompanied by increased secretion of mucus, active proliferation of epithelial cells—normal and abnormal—and great rush of white-blood-corpuscles to the submucous

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and sub-epithelial structures. Ecchymosis and sub-epithelial infarctions take place more rapidly than the chemical transformations necessary to the elaboration of the former material. The swollen epithelium separates in patches, and the entire inner surface of the bladder becomes thickly coated with vitiated mucus, containing myriads of white-blood-cells devoid of life and living organisms. The presence of micro-organisms (if they be present at all) is matter of pure accident. The alkalinity of the urine is excessive, and ammoniacal decomposition of the contents of the bladder is almost universal after the process has continued for any length of time. The pathology of the other steps of the process is identical with that observed in the affection following infection from without. And the same holds good in all forms of vesical concretions, except to some extent in cases of uric acid stone.

Stone in the bladder—uric acid calculus—may be formed in the kidney, descend to the bladder, and grow by formation of other like crystals, which aggregate around and upon its rough points; or, from excessive acidity of urine, crystalization may take place in the viscus itself. In the earlier stages of the formation of uric acid stone, there are probably slight changes in the vesical mucous membrane, the acidity of the urine being decidedly promotive of reformation of normal epithelium when abrasions have occurred. In fact, many cases of uric acid calculi have been observed, in which the contents of the bladder gave no indication of disease of the mucous membrane, although many of the symptoms of chronic cystitis were present. It is a fact, however, that in the vast majority of cases, uric acid stones become encrusted with phosphates before their existence is recognized, and are then practically phosphatic calculi. But in these cases there has generally been a form of chronic cystitis, in which the proliferative changes have produced alteration in the muscular and submucous coats of the bladder, as well as in the sub-epithelial layer of the mucous membrane itself.

Here the primary results of the intra-cystic formation

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have been decidedly in the direction of a true hypertrophy of the muscular coat of the organ, and this has led to an hyperæmia which results in a hyperplasia of the neighboring coats internal to it. The stone acts as a foreign body, but repair of the surface injured by contact with it, under the influence of a fluid only excessively normal, causes the irritation to act as stimulation. As elsewhere, excessive stimulation here produces *first* increased normal development, and *then* abnormal structure, and abnormal condition of the system.

The hypertrophy of the muscle fibres and cellular coat causes a contraction of the cavity of the viscus; the constant stimulation renders the nervous system incapable of maintaining a proper equilibrium, the blood becomes again excessively alkaline, and loaded with excess of phosphates, which gradually neutralize the acid urine, a crust of phosphatic deposit forms upon the stone, and the urine voided is now recognized as that of chronic cystitis.

The same series of changes is to be noticed in that form of the affection incident to hypertrophy of the prostate, and urethral stricture; while in the cystitis of the spinal affections the first departure may be the actual ammoniacal decomposition of the blood itself.

The Treatment of Chronic Cystitis is to be begun by finding out, if possible, what cause underlies the disease. This done, the cause must be removed, if practicable; or, where the cause has ceased to be operative, the effects of that cause must be combatted. Ten years since, the writer treated a case of chronic cystitis in a man ninety years of age (in whom catheterization could not be accomplished, and in whom retention of urine took place), by aspiration of the bladder on seventeen consecutive days. The disease was here secondary to an enlarged prostate, and superinduced by attempted catheterization. At the expiration of the time indicated, the retention was entirely relieved; a catheter passed readily into the bladder, the viscus was repeatedly washed out, and the old man kept comfortable, as

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far as his urinary organs were concerned, until the day of his death, several weeks later.

Eighteen years ago, an old man in a neighboring section, who had suffered with enlarged prostate and chronic cystitis, became suddenly the victim of retention. All attempts at catheterization failed, and a consultation of physicians resulted in the plunging of a large trocar and canula into the bladder above the *pubis*. The urine was evacuated, the canula retained *in situ*, with occasional removings for purposes of cleansing, for several years. The cystitis disappeared, the enlarged prostate shrank, so that, for some year or more before his death, the urine was voided freely through the urethra, and absolute comfort was secured. These cases were a surprise to the physicians concerned, and were not fully credited by other medical men who were informed of the results.

Six months ago, after careful study of the reported cases of epi-cystotomy, done for the relief of chronic cystitis by Dr. Hunter McGuire, of Richmond, Va., the writer opened the bladder of an old man suffering with chronic cystitis, resulting from enlarged prostate of several years' standing. The walls of the organ were much thickened posteriorly; the muscular coat evidently contributing chiefly to the altered condition. The after-management of the case was that recommended by the reporter above mentioned, and the recovery was uninterrupted and complete. The new urethra formed, however, had closed in two months from the date of operation, but there has been no return of any of the symptoms of cystitis, and the old man has to-day as perfect control of his bladder and urethra as he did forty years ago.

To go back, however, cases of chronic cystitis should be radically treated before the ureters and kidneys have become involved in the chronicity of the disease. Treat a dirty, irritated bladder, with thickened walls, on the same principles that the modern surgeon treats wounds or diseased joints. It is upon these principles that the distinguished operator, already referred to, has given to the

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world an operation so simple, so safe and easy of execution, that old men—or young ones either, for that matter—need no longer die nor fill out an existence worse than death, in consequence of bitterly-regretted indiscretion, or of alterations in their genito-urinary apparatus entirely beyond their control.

On the same principles strictures are cut, perineal sections done, bladders washed out. Median and lateral lithotomy cured the cystitis caused by stone in the bladder on the broad principles on which Hunter McGuire cures enlarged prostate and its accompanying cystitis, by the formation of an artificial supra-pubic urethra. In cases of prostatic enlargement the supra-pubic urethra is far preferable to the formation of a perineal fistula, be the opening ever so large or so patulous; and the reasons are obvious.

What are the principles? Remove the cause, as stated, if it is still operative, as, for instance, if a concretion exist. Nor, in cases of stone, can any one method be applied to all cases; and while it is hardly probable that any one surgeon of to-day would assert that the supra-pubic incision is adapted to all cases, it is a plan well worth consideration in every case that presents itself. Dr. McGuire's uniformly successful results in every case when chance was offered, and recoveries in several seemingly beyond hope at the time of operation, teach that, in skillful hands at least, the procedure is safe. If it fail, the fault is that of the operator.

The removal of a stone and the observance of ordinary precautions generally cures the accompanying cystitis, nature herself conforming to her own unalterable laws.

Cleanliness, drainage and rest are the watchwords of success. One operation gives ample scope for the practice of all indications, no matter what condition prevails.

Open the bladder by an incision above the pubis, as Dr. McGuire so plainly directs in the *Virginia Medical Monthly* for October, 1888, and the field of operation is clearly before the eye. If a calculus is found, remove it, cleanse the bladder thoroughly and repeatedly, and the writer has found that the cystitis will get well.

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If a cystitis accompanying hypertrophy of the prostate is discovered, one has nothing to do but to keep the wound clean and the urine acid, and the cystitis will get well and the gland muscle shrink to its natural size. The use of internal medication and catheterization here is worse than useless, as the irritation of instrumentation aggravates the disease.

If tumors or tuberculous nodules are found, scrape them away as far as possible, and touch bleeding points with the galvano cautery; or if malignancy prevail, the ureters sound, and one has the desire to leave a name behind him, he might extirpate the entire viscus, and stitch the ureters in the lips of the abdominal wound. The patient might not recover, but the cystitis would have been removed.

If the cystitis be the result of microbian infection, or the condition of the viscus be as described in discussing the pathology of this form of the affection, washing out the bladder with some cleansing fluid should be frequently practiced. Solutions of boric acid or Thiersch's solution are probably the most efficient.

A drainage tube should certainly be employed in these cases, and, at the same time, the bladder may be flushed out through the urethra, the escape for the fluid used being through the abdominal orifice.

The rest secured to the muscle fibres of the prostate gland, as well as to those of the bladder itself, induces rapid return to a condition near the normal, particularly when the disease has been of long continuance and degenerative changes have set up.

Keep the fistulous track open with a silver or hard-rubber canula, as Dr. McGuire advises, or line it with skin from the belly, as has been successfully done by Dr. Robert T. Morris, of New York, as a modification of Dr. McGuire's operation; and the experience of these distinguished surgeons, and that of others of less wisdom and even no reputation, teach that chronic cystitis of almost every degree, and from nearly all causes, will result in perfect recovery.

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ART. IV.—Importance of Nasal Surgery and Nasal Therapeutics in the Treatment of Aural Catarrh.*

By JOSEPH A. WHITE, M. D., of Richmond, Va.

SENIOR SURGEON TO THE RICHMOND EYE, EAR, THROAT AND NOSE INFIRMARY.

About ten years ago, I read a short paper before the Medical Society of Virginia, entitled, "Catarrhal Deafness," in which I said, "the ear and throat cannot really be separated, being intimately connected and dependent upon one another. A throat specialist should have a thorough knowledge of ear diseases, but it is much more important that an aurist should be intimately familiar with throat and nasal troubles—more especially as the treatment of ear diseases so frequently resolves itself into the treatment of the throat and nose."

In this paper I urged the uselessness of the very limited local treatment of the ear in aural catarrh, unless the accompanying and probably causative throat or nasal trouble was relieved. At that time "Nasal Surgery" was an infant Hercules. Now it is a full-grown athlete, bearing on his shoulders the spoils of all the lions that stood in his path.

During this developement, I presented before the Society, in 1884, a communication, entitled, "Influence of Naso-Pharyngeal Growths, Obstructions and Hypertrophies upon the Hearing." In this paper I explained the way that nasal and throat affections caused deafness.

First. By extension of the catarrhal process along the Eustachian tube to the middle ear.

Second. By direct obstruction and pressure on the mouth of the tube by hypertrophic mucous tissue.

Third. By interference with the normal ventilation of the tube from nasal stenosis.

Fourth. By loss of action in the palato-tubal muscles—the so-called "paretic deafness," due to vaso-motor influences.

I called attention then to the importance of minute ex-

* Read before the Medical Society of Virginia, at Rockbridge Alum Springs, Va., September 3rd, 1890.

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amination of the nose anteriorly and posteriorly, and reviewed the various forms of hypertrophies, outgrowths, obstructions, etc., that could influence the ear in any way. I explained the methods of getting rid of the abnormalities in the nose and naso-pharynx—methods some of which have been modified or improved since then.

There has been a steady advance in nasal surgery, and it has brought the nose into such prominence that it might be denominated "the new fashion." Discoveries often come, accompanied by all the peculiarities of a new fashion, and are then likely to cause older truths to be neglected and undervalued. I have no doubt that nasal surgery can be and sometimes is overdone under the influence of this fashion—but fashion dies and truth lives—and though obscured for a season, as time prunes the excrescences of the novelty, the truths will prevail. The conservative thinker can give equal credit to the old truths and new discoveries, each in their place; the new need not discredit the old.

This was the mistake of Dr. W. H. Daly, of Pittsburg, who was invited to read a paper before the New York Academy of Medicine, last December. He raised a "tempest in a teapot" by the subject matter of his discourse, entitled, "The Relation of Naso-Pharyngeal Disorders to Deafness and General Ear Affections, with Remarks as to Treatment." Had he confined his remarks to the relations of modern nasal surgery to aural catarrh, and to the fact that sufficient attention was not given to this subject by many otologists, he would have found few objectors.

In this paper, he claimed that too little attention was given to the nose and throat, and not sufficient stress laid upon the value of intra-nasal surgery and therapeutics in the treatment of deafness and general ear affections. His remarks were too sweeping, and they were considered an indictment of modern otology, and were so resented by many of the distinguished gentlemen present. Whilst all admitted the value of such methods of treatment, they resented the imputation that otologists of the present day

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neglected the nose and throat, in their management of aural affections.

Whilst agreeing with Dr. Roosa and others, who took exception to his remarks, that the more advanced otologists of this day do give all proper attention to the nasal and throat troubles accompanying aural catarrh, and whilst perfectly aware that for nearly fifty years back some of the writers on otology have referred to this matter, I must agree with Dr. Daly in the statement that such practice has not been general among aural surgeons, even in the last decade. I am familiar with most treatises and works on otology, and it is the exception, not the rule, that any special reference is made to the relations of nasal surgery to aural catarrh, although applications, etc., to the naso-pharynx are recommended. It may be that this is due to the fact that modern nasal surgery is almost entirely a developement of the last ten or fifteen years, but the above remark holds good of some works issued during these years.

There are many ear affections which have practically no relation to nasal or naso-pharyngeal troubles, and not influenced by the treatment of these latter; and hence Dr. Daly's percentage (80 per cent. of aural disease being directly influenced by nasal affections) is rather above the average, in my opinion. A single opinion does not count for much, but after twenty years active practice of this specialty, a good part of which has been spent in teaching with good clinical facilities, it is worth considering.

Even in aural catarrh, there is a form known as "sclerosis" (progressive deafness), due as much to trophic changes as to the catarrhal process, which does not seem to be influenced by treatment of co-existing diseases of the nose and naso-pharynx. It goes from bad to worse in spite of that most approved treatment. Twenty years ago, I wrote an article, "Tenotomy of the Tensor Tympani," in this affection, as suggested and practiced by my preceptor, Weber-Liel, and believe I was the first man in this country to perform this operation in sclerosis. The results were only occasionally satisfactory in relieving the tinnitus, and it has

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not met with much favor. But Weber-Liel has never lost faith in his operation, and I now see that it is again advocated by Professor Kessel and Dr. Cholewa.

But setting aside this form of so-called aural catarrh, sclerosis of the tympanum—which can be differentiated by the tuning fork—there is no doubt of the value of nasal therapeutics and nasal surgery in most cases of aural catarrh.

No one questions the advantages in such cases of removing *adenoid tissue* from the vault and walls of the naso-pharyngeal space. This is especially so in young subjects who have the adenoid tissue associated with defective hearing. In old people, with advanced aural changes, it is useless to remove the remains of adenoids which have already done all the damage they can, unless it is done to get rid of post-nasal secretion.

In June, 1889, I presented a paper—"The influence of the So-called Third Tonsil on the Hearing"—to the American Medical Association, in which I gave some statistics from my own experience, and called attention to some effects of different forms of adenoids, not generally considered. It is easy enough to understand how deafness can result from blocking up the post-nasal space with masses of soft glandular tissue, because it causes direct obstruction of the Eustachian tubes. This is usually the case in young children. But in older subjects we often find deafness resulting from compression of the Eustachian tubes by hypertrophied tissue above and behind them, which seriously interferes with the resiliency and elasticity of the cartilaginous openings. The catarrh, which invariable accompanies the presence of this tissue, even when it is no impediment to breathing, by extension to the drum, adds to the impairment of hearing.

My experience teaches me that it should always be removed, if you would get rid of the naso-pharyngeal catarrh. The annoying secretion from the post-nasal space, which is usually present in these cases, can only be permanently gotten rid of by the destruction of the hypertrophic tissues.

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Cases that resist all other methods of treatment are rapidly relieved by the destruction of the hypertrophies. It makes no difference how you do this, whether by the scraping with the finger, with cutting forceps, curettes, snares or galvano-cautery. The point is, to get rid of it all at the vault, sides and back of the naso-pharyngeal space, whether it interferes with breathing or not.

With the aid of *my self-retaining palate retractor*, or any other similar instrument, the post-nasal space can be so thoroughly exposed to view, that the minutest proturberances, enlargements or hypertrophies can be seen and removed, and cauterized. If cocaine is properly applied to the parts, such operations can be done without pain. I have no difficulty in performing these operations on children over seven years of age. If you once get their confidence, by proving the fact that you will not hurt them, the rest is easy. Some writers prefer the finger for the diagnosis of this condition, but I have always found the sight superior to the touch, and hence prefer to use the retractor whenever practicable. Those who object to it, either have never tried it, or don't know how to use it.

But the value of nasal surgery in treating aural catarrh is demonstrated in other ways than in the removal of the so-called adenoid tissue. If it here removes both a direct and indirect cause of the aural affection, allowing a better chance of restoring the hearing by accompanying and subsequent treatment of the ears, it does equally as much in other nasal complications of aural catarrh.

In the removal of any or all obstructions to nasal breathing and nasal ventilation, its services are unquestionable. Nasal obstruction is one of the most frequent causes of catarrhal conditions of the nose, Eustachian tube and drum cavity, especially obstructions of the lower nasal meatus, whether by hypertrophy of the inferior turbinated tissues or deflections, outgrowths, or spurs of the septum. If you wish to get rid of the aural catarrh, you must, undoubtedly, at the same time, cure the nasal catarrh; and to do this, you must restore normal nasal ventilation, drain-

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age and breathing. All causes of obstruction must, therefore, be removed. Here, again, it makes no difference how you remove them, so that you get rid of them. Discussions as to the methods of doing this are a waste of time. Each case has its own features, and the conservative and competent nasal surgeon will not tie to any special method of operating, but be guided by circumstances. For instance, in cases of deflection of the nasal septum, the punch, the hand-saw or drill may be needed, according to the character of the deflection, its thickness, curvature, etc. I use any of the methods, as the case may require.

In the removal of turbinated hypertrophies, the cold snare, galvano-cautery snare, or linear cauterizations, with the galvano-cautery, should be used as may be needed. One is applicable to some cases; one to others. A good deal of bosh is written about the galvano-cautery, by writers who have been very unfortunate in its use, or who don't know how or when to apply it. There is no known surgical measure or surgical operation that has not been the means of doing harm by incompetent and careless operators.

That asymmetry and obstructions of the nasal chambers have much to do with the production and aggravation of aural catarrh, is admitted by all modern authors; and that the above operations, for the relief of this condition, are most valuable aids to its treatment, is proven by the numerous reports in the journals of cases in point. As shown above, I have already more than once given you my experience, and further familiarity with the subject, only confirms my former impressions.

If I have been writing on this subject for ten years past, as well as other better known writers, both those in whose footsteps I followed, and those who came after me, it would seem that the topic was a well-worn one, sufficiently familiar to the whole medical world. Apparently this is not so, however, or else why should the Chairman of the Section of Laryngology and Otology of the A. M. A., Dr. John O. Roe, of Rochester, see fit, at the late meeting in Nashville, to call attention to the importance of this subject? And why

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should the *Journal of the Respiratory Organs* consider his remarks of sufficient importance to copy them into an editorial in July, 1890, if they were not of weight and value in this day?

He said that "few diseases of the ear can be successfully treated without a thorough knowledge of diseases of the nose, naso-pharynx and fauces. It is not enough for one who would be skilled in the treatment of diseases of the ear to be able to detect the more pronounced diseases of the nose and throat; he must also be able to recognize the slightest abnormalities in the nose and throat, and be sufficiently skilled to correct these as well. For example, the limited bony pressure of a small exostotic spur in the nose might be the means of exciting a persistent tinnitus or a labyrinthine(?) congestion; and without the removal of this exciting cause, the treatment of the ear would be futile."

Almost the same words I used here ten and six years ago, but still new to so many, that their practical wisdom is worthy of editorial praise in a special journal. Can anything demonstrate in a stronger manner the "Importance of Nasal Surgery and Nasal Therapeutics in Aural Catarrh?"

ART. V—**Indigestion a Cause of Bright's Disease.***

By WM. B. GRAY, M. D., of Richmond, Va.

Theory in the beginning, and success at the bedside based upon it, must be my apology for asking your attention to the hitherto unexplored field of *Indigestion—A Cause of Bright's Disease.*

I need not remind you that it is claimed by those whose business it has been, and is, to investigate the subject, that to enter the circulation, substances *must become peptones as a prerequisite to absorption.*

With this proposition, delicate as is the great subject and gravely as I regard the issues of the material question, in

*Read before the Richmond Academy of Medicine and Surgery, October 28th, 1890.

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the light of investigation, and of experience as well, I must modestly venture to take issue.

In the outset, it is pertinent and proper to glance at normal digestion, so far as proteids are concerned—they being the matters with which we particularly have to deal in the consideration of our subject.

Saliva exercises no action on proteids or fats. The stomach chymefies, and its product is of acid reaction. This acidity is neutralized by the alkali of the intestinal mucous membrane and the pancreatic juice.

Pepsin and the dilute hydrochloric acid transform proteids into a soluble form, to which Lehmann gave the name of peptones. These peptones are probably re-transformed into serum albumin before being absorbed and entering the circulation.

The pancreatic juice, though much more energetic, acts very much as the saliva ferment. Its ultimate action is to convert proteids into true peptones or tryptones.

The bile, acting vigorously upon the now alkalized pabulum or food, converts the same into chyle. For the first time in the process of digestion, it is ready for absorption, becomes assimilable or convertible into tissue.

The large intestine is an absorptive rather than a secretory canal. At the beginning of the colon, its contents are thin and watery, becoming more solid in their further course.

Klug and Koreck regard Lieberkuhn's glands as absorbing structures. In the dog, the secretion of the large intestine has no digestive properties. Toxic substances are more rapidly absorbed here than from the stomach. Unchanged fluid egg albumin, milk and its proteids, flesh, juice, etc., all have been demonstrated to have been absorbed. This proves that a non-assimilable albumin (*not a peptone*) may find an entrance into the circulation.

By way of parenthesis here, I would remark that, according to J. W. Fraser, all infused beverages—such as tea, coffee, cocoa, etc.—retard the peptic digestion of proteids; while brandy, whiskey, and gin, in moderate quantity, promote digestion by exciting the secretory glands. Wines are in-

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imical, especially to salivary digestion, because of their acidity. By reason of the tannin it contains, tea is more objectionable than either coffee or cocoa.

The whole intestinal tract, from the cardiac orifice of the stomach to the anus, being lined by columnar epithelium, is capable of performing the function or act of absorption. Though the mouth and œsophagus are lined by stratified squamous epithelium, they are adequate to effect absorption, as may be proven by placing cyanide of potassium on the tongue and getting its prompt toxic effect. In the intestinal tract, the direct channel of absorption is the capillaries; and the indirect, the lacteals of the mucous membranes—the former avenues convey to the rootlets of the portal vein, while the latter pass into the lymphatics, thence into the thoracic duct, and enter the circulation where that duct empties into the subclavian vein.

The absorption of digested matter occurs by endosmosis, diffusion, or filtration. Endosmosis takes place in the intestinal tract, through the mucous membrane, and the blood and lymph capillaries.

Filtration occurs through the pores of a membrane by pressure.

Diffusion needs no explanation.

If digested matters enter the circulation by one of these processes, why may not the undigested as well? Let us see if they do not. It has been conclusively demonstrated by Brucke, that unchanged proteids *can* be absorbed—and absorbed even from the large intestine. Czerny and Latochenberger add their testimony in attestation. Alcohol, tartaric, citric, malic, and lactic acids, introduced into the intestinal canal, are found in the urine in their respective normal conditions. Metallic salts appear to be held in solution by proteids, and are probably absorbed along with them.

Sulphate of iron, cyanide of potash, and hydrocyanic acid have been found in chyle, each retaining its own unchanged identity. Nitrate of silver, after traversing the whole line from the mouth, *per vias naturales*, declares its own integrity

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under the skin, and normally responds to light. None of these are peptones; still they have entered the circulation, and in an unchanged chemical condition.

We think the evidence we have adduced is abundant to prove the absorbability of other matters than peptones, and their ready entrance into the circulation.

Now, do albumins, in a non-assimilable state, produce Bright's disease? Being non-convertible into tissue, they are foreign bodies, and must be eliminated by the kidneys. Claude Bernard first demonstrated that egg albumen, introduced into the blood, is excreted by the kidneys. Lehmann and Stokvis have also proven the same fact by experimental investigation.

It is further established that serum albumin also escapes along with the excretion of egg albumen. Even when introduced by way of the stomach, egg albumen excites albuminuria. Christison has pointed out the same truths as to proteid foods. Even in the dog, the subcutaneous introduction of egg albumen will, in a short time, produce Bright's disease.

It is further conclusively established that the excretion by the kidneys of either egg or serum albumin will, and does, produce nephritis—albuminuria—Bright's disease.

Dr. Brunton gives an account of a patient whose urine always contained albumin after eating animal food in the morning. He ascribed it to the *imperfect digestion of proteid substances* by the pancreas. The same imperfect digestion of these foods is further abundantly and repeatedly exemplified by Drs. Pavy, C. Bernard, Gubler, and others—pure albumen being found in the urine.

And now to sum up:

1st. We have attempted to show the normal digestion and disposition of the proteids, and their entrance into the circulation, in a convertible form, into tissue.

2nd. We have adduced indisputable evidence of the capability of the entire tract for ingesta to induct into the circulation other matters than proteid substances or peptones.

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3rd. That such non-assimilables do enter, and are carried, into the blood by an easy and ready transit.

4th. That, being non-assimilable, so far as proteids are concerned, they are necessarily foreign bodies, and *must be eliminated by the kidneys in particular.*

5th. That albumin will not be tolerated by the kidneys without exciting nephritis—albuminuria—Bright's disease.

ART. VI.—"Parker's Plug" for Treatment of Epistaxis.

By WM. W. PARKER, M. D., of Richmond, Va.,

PRESIDENT MEDICAL SOCIETY OF VIRGINIA, ETC.

Some years ago I called attention in your journal briefly to a method of my own of plugging the posterior nares in epistaxis from the front—a practice I had pursued for thirty years without a failure. I find the subject of treating epistaxis has been lately discussed in some Northern journals, and some new methods have been proposed.

I received a few days ago from a Southwestern physician, a Professor in a Medical College, a letter asking me to send him "the plug" I used, saying he wished to present it to his class. Verbal descriptions of even simple appliances are often misunderstood; and I have concluded to present your readers with a wood-cut illustration of this little device, which is so simple that any man or woman of ordinary sense can make one in a few minutes, and apply it with ease, safety, and success.

I generally use patent lint as the material, because it is so soft and easy of introduction, and causes no pain whatsoever. I often push it up my own nose when called to children with bleeding nose, to show them that it does not hurt. Nor does it hurt while it remains in place as a plug. Its superiority to Belloq's canula is too obvious for mention. I have known my plug to succeed when Belloq's method failed.

For euphony's sake, I may be permitted to call my method "Parker's Plug;" and accompanying this you have a

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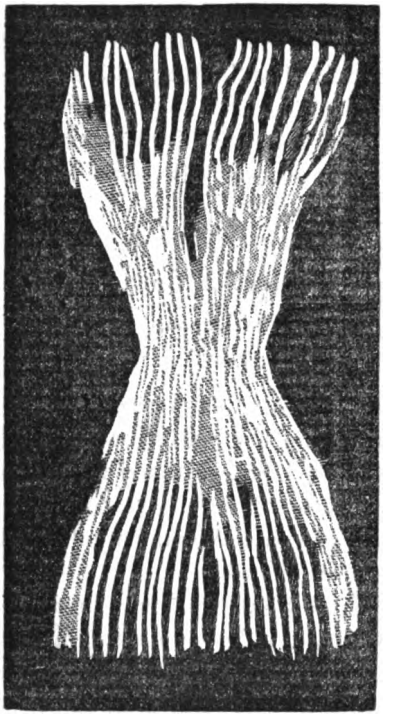
cut of it. The artist, however, makes the string to go



PARKER'S PLUG.

around the top of the plug. This is not correct. The string, made of spool cotton, is tied around the middle of the lint (see cut to the left), and the lint is simply doubled on itself, while the string hangs down from within the cone like the tongue of a bell.

This plug is simply pushed back into the nares beyond the bleeding point, with the loose ends of the plug or strings looking forward. The blood is clotted by coming in contact with the many string-ends. The front of the nose may, of course, be plugged with almost anything.

The Professor referred to asks if "candle-wick" would not do as well as lint. I think it would answer very well. I have used large spool cotton when I could not get patent lint. I would remove the plug in twenty-four hours. I have never found it necessary to replace it.

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Correspondence.

A Few Practical Teachings of Dr. Granville Bantock of the Samaritan Hospital, London.

Dear Dr. Edwards,—I have thought a few practical points which I am learning as private pupil of London's most distinguished gynæcologist, Dr. Bantock, might be of interest to some reader.

I will first state that he has recently moved from the old Samaritan, on Seamour street, to the new and beautiful Samaritan, on Marylebone Road West. Dr. Bantock's Hospital is certainly a model of cleanliness, extreme comfort, and architectural beauty. It is to Europe what Johns Hopkins is to the States.

Dr. Bantock uses *no so-called* antiseptics, but scrupulous cleanliness in abdominal sections. He claims, and I think has proven conclusively, that perfect cleanliness is the only antiseptic entirely free from danger in abdominal surgery. As far as the germ theory is concerned, Dr. Bantock teaches that surgery never could have struggled into existence if germs had the unbounded influence which is claimed for them by some antisepticists—that there should be no difference in the mortality of operations in large and in small hospitals, in city or in country. He has conducted several most interesting experiments in his hospital to prove that cleanliness was all that is required to obtain the lowest mortality in abdominal section. The patient is given a thorough bath, not by herself, but by a competent nurse, just before the operation. For all instruments, sponges, ligatures, and towels, he uses *only* the ordinary city water heated, and kept as hot as the hand can bear, not necessarily boiled. Of course, his hands and arms are well scrubbed. He makes his incision as short as possible, according to the size of tumor or sack to be removed—generally three inches long. I am more pleased with his ligation of the pedicle in the removal of ovarian tumors and broad ligament cysts than any I have ever seen or read of.

For several years past I have frequently read of the pa-

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tient dying from hæmorrhage of the stump—in some cases, four or five days after the operation. I did not fully understand why this was until Dr. Bantock explained it. The *outer* edge of the pedicle is the one which nearly always slips from the ligature, if either does. It is this lateral or outer edge of the broad ligament which consists of *two* folds of the peritoneum, and contains the principal blood vessels. In order to obviate this extra danger, he secures this outer fold with a separate ligature by going in nearly an inch from the outer edge with his needle, and tying down on this, before transfixing for the main ligatures. He says he has never had the least hæmorrhage since adopting this plan; whereas before, he lost several patients, and the autopsy showed that the outer edge of the pedicle had slipped, and the patient died from hæmorrhage. The anatomy of the broad ligament has to be at one's command to fully appreciate the importance of this first suture. Some place a separate ligature around the stump after cutting away the growth, but this occurs to me—though I have never seen it mentioned—that in the event this last ligature should not be carefully applied directly over the transfixed ligature, tissue could become strangulated and set up septic trouble.

Dr. Bantock uses hot salt (chloride of sodium) water for flushing the abdominal cavity when necessary. He gives Dr. Gill Wylie, of New York, credit for the addition of the salt, seven parts to one thousand of hot water. When this is used in the cavity, the process becomes "a true indirect transfusion." Therefore, it can be easily understood how the hot-salt solution is serviceable in lessening shock due to loss of a quantity of blood.

He flushes the abdominal cavity and uses the glass drainage tube under the following conditions:

1st. If he encounters many old adhesions, and, in breaking them down, has to apply many ligatures, consequently expects oozing afterwards.

2nd. If the contents of a sack ruptures in the least, or if he finds any filthy fluid in the abdominal cavity, he never fails to irrigate with about two gallons hot salt water.

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He is not at all particular to get out all of the water before closing the abdominal incision; in fact, he leaves a pint or more frequently, and draws it out soon afterwards with a syringe and rubber tube attached, which passes down the glass drainage tube. He never presses sponges firmly against the peritoneum to absorb any kind of fluid, but irrigates instead. He uses three sizes of best "silk-worm gut" for ligatures for everything, except the pedicle—silk for this. The patient comes to the operating table with bowels almost entirely free from fæcal matter—having eaten absolutely nothing for twenty hours, and *nothing* permitted afterward for twenty-four hours, not a drop of water. If there is regurgitation of bile into the stomach and nausea, he orders grs. xv sodii bicarb. in ℥iij hot water. This relieves every time. His reason for entirely emptying the bowels is to give the gut nothing to do for thirty-six hours, or longer. This enables him to withhold all opiates from the patient.

The principal plea for the administration of opium after abdominal section, is to keep the whole intestine as quiet as possible. This is much better effected by giving the intestines absolutely nothing to do for the above-named time, and keeping up gentle elastic support, than by binding down the abdominal walls on the intestines with strips of adhesive plaster with hard dressings, as I have always seen done. and then be compelled to give opium to relieve pain.

I have closely watched all of Dr. Bantock's cases for six weeks now, and have been surprised to have each one tell me how little pain they have after the operation. They express themselves as being surprised at so little pain. They sleep well after the first night. He claims as his reason for not giving opium—which every one knows—is that it diminishes secretion and interferes with the normal and healthy action of the bowels, which is very undesirable at this time.

Dr. Bantock performs four or five sections per week. Not one has died since I have been here. His success is wonderful. His mortality now is 3 per cent. Tait's, 2.5. The temperature rarely gets above 100° F. He has performed

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one vaginal hysterectomy and one supra-pubic. Both did splendidly. We often think in the States, when we hear of these very low mortalities, that they do not correctly report their cases. Some may not, but I have been so situated that I could see and judge for myself for the past six weeks. Through my friend, Dr. Gill Wylie, of New York, I was fortunate enough to get in as one of only two private pupils of Dr. Bantock. He will not take but two at a time. He permits others to witness some of his operations, but his two pupils are with him all the time. I have an engagement with Mr. Lawson Tait, of Birmingham, for November and December, as one of four private pupils. Two assist him each month in his operations, though all four are with him all the time in his private hospital.

For the benefit of some one who might be contemplating a visit to these two great surgeons in the near future, let me suggest, if they wish to become *private pupils*, write at least four months before leaving the United States, making the engagement. They require you to send the money 30 days before your time begins with them. Mr. Tait charges 20 guineas ($105) per month and Dr. Bantock 10, and there is no chance to get one cent off. But it is richly worth every dollar of it to a man who is expecting to make a specialty of gynæcology. One can see more under these two great surgeons in one month than he can in New York in six, and *time* is what is so valuable with most of us. I could not get in private practice and from text-books what I am learning here, of which I stood so sadly in need.

I hope to be able to give you something more interesting when I write from Birmingham.

LIVIUS LANKFORD, M. D.

We call the attention of our readers to the advertisement of Messrs. R. A. Robinson & Co., Louisville, Ky., which will be found on another page of this issue. This firm was established forty-five years ago, and enjoys a widespread reputation as a sound, honest, reliable business house. We do not hesitate to endorse their preparations as being all they claim for them.

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Analyses, Selections, etc.

Koch's Communication on a Cure for Tuberculosis.

An extra edition of the *Medical News*, in the form of a Supplement to the issue of November 15th, gives its specially cabled full translation of the long promised original article by Professor Robert Koch, of Berlin, which was published in the *Deutsche Medicinishe Wochenschrift*, of November 14th, 1890. We republish the article in full:

In an address delivered before the International Medical Congress, I mentioned a remedy which conferred on the animals experimented upon an immunity against inoculation with the tubercle bacillus, and which arrested tuberculous disease. Investigations have now been carried out on human patients, and these form the subject of the following observations. It was originally my intention to complete the research, and especially to gain sufficient experience regarding the application of the remedy in practice, and its production on a large scale, before publishing anything on the subject; but in spite of all precautions, so many accounts have reached the public, and in such an exaggerated and distorted form, that it seems imperative, in order to prevent false impressions, to give at once a review of the position of the subject at the present stage of the inquiry. It is true that this review can, under these circumstances, be only brief, and must leave open many important questions.

The investigations have been carried on under my direction by Dr. A. Libbertz and Stabsarzt Dr. E. Pfuhl, and are still in progress. Patients were placed at my disposal by Professor Brieger, from his polyclinic; Dr. W. Levy, from his private surgical clinic; Geheimrath Drs. Fräntzel and Oberstabsarzt Kohler, from the Charite Hospital; and Geheimrath v. Bergmann, from the surgical clinic of the University. I wish to express my thanks to these gentlemen.

As regards the origin and the preparation of the remedy, I am unable to make any statement, as my research is not yet concluded. I reserve this for a future communication.*

The remedy is a brownish, transparent liquid, which does

* Doctors wishing to make investigations with the remedy at present can obtain it from Dr A. Libbertz, Lueneburger Strasse, 28, Berlin. N. W., who has undertaken the preparation of the remedy with my own and Dr. Pfuhl's co-operation, but I must remark that the quantity prepared at present is but small, and that larger quantities will not be obtainable for some weeks.

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not require special care to prevent decomposition. For use, this fluid must be more or less diluted, and the dilutions are liable to undergo decomposition if prepared with distilled water. As bacterial growths soon develop in them, they become turbid, and are then unfit for use. To prevent this, the diluted liquid must be sterilized by heat and preserved under a cotton-wool stopper, or, more conveniently, prepared with a one-half per cent. solution of phenol.

It would seem, however, that the effect is weakened, both by frequent heating and by mixture with phenol solution; and I have therefore always made use of a freshly-prepared solution. Introduced into the stomach, the remedy has no effect. In order to obtain a reliable effect, it must be injected subcutaneously; and for this purpose we have exclusively used the small syringe suggested by me for bacteriological work It is furnished with a small India-rubber ball, and has no piston. This syringe can easily be kept aseptic by the use of absolute alcohol, and to this we attribute the fact that not a single abscess has been observed in the course of more than a thousand subcutaneous injections.

The place chosen for the injection, after several trials of other places, was the skin of the back between the shoulder-blades and the lumbar region, because here the injection led to the least local reaction—generally none at all, and was almost painless. As regards the effect of the remedy on the human patient, it was clear from the beginning of the research that in one very important particular the human being reacts to the remedy differently from the animal generally used in experiments—namely, the guinea-pig—a new proof for the experimenter of the all-important law, that experiment on animals is not conclusive, for the human patient proved extraordinarily more sensitive than the guinea-pig. As regards the effect of the remedy, a healthy guinea-pig will bear a subcutaneous injection of two cubic centimetres, and even more, of the liquid without being sensibly affected; but in the case of a full-grown healthy man 0.25 cubic centimetre suffices to produce an intense effect. Calculated by the body-weight, one-fifteen-thousandth part of the quantity, which has no appreciable effect on the guinea-pig, acts powerfully on the human being.

The symptoms arising from an injection of 0 25 cubic centimetre I have observed after an injection made in my own upper arm. They were briefly as follows: Three to four

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hours after the injection there came on pain in the limbs, fatigue, inclination to cough, difficulty of breathing, which speedily increased in the fifth hour, and were unusually violent. A chill followed, which lasted almost an hour. At the same time there were nausea, vomiting, and a rise of body temperature to 39.6°C. [103.4° F.]

After twelve hours, all these symptoms abated, the temperature fell, and on the next day it was normal. A feeling of fatigue and pain in the limbs continued for a few days, and for exactly the same period of time the site of injection remained slightly painful and red. The smallest quantity of the remedy which will affect the healthy human being is about 0.1 cubic centimetre, equal to one cubic centimetre of the one-hundredth dilution. As has been proved by numerous experiments, when this dose is used reaction in most people shows itself only by slight pains in the limbs and transient fatigue. A few showed a rise of temperature to about 38°C.

Although the effect of the remedy in equal doses is very different in animals and in human beings, if calculated by body-weight, in some other respects there is much similarity in the symptoms produced, the most important of these resemblances being the specific action of the remedy on the tuberculous process, the varieties of which I will not here describe. I will make no further reference to its effects on animals, but I will at once turn to its extraordinary action on tuberculosis in human beings. The healthy human being reacts either not at all, or scarcely at all, as we have seen, when 0.1 cubic centimetre is used. The same holds good with regard to patients suffering from diseases other than tuberculosis, as repeated experiments have proved; but the case is very different when the disease is *tuberculosis*. A dose of 0.01 cubic centimetre injected subcutaneously into tuberculous patients causes a severe general reaction as well as a local one.

I gave children aged from two to six years one-tenth of this dose, that is to say, 0.001 cubic centimetre—very delicate children only 0.0005 cubic centimetre—and obtained powerful, but in no way dangerous, reaction. The general reaction consists in an attack of fever, which usually begins with rigors, and raises the temperature above 30°, often up to 40°, and even 41°C. This is accompanied by pain in the limbs, coughing, great fatigue, and often sickness and vomiting. In several cases a slight icteroid discoloration was observed, and occasionally an eruption like measles on the

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chest and neck. The attack usually begins four to five hours after the injection, and lasts from twelve to fifteen hours. Occasionally it begins later, and then runs its course with less intensity.

The patients are very little affected by the attack; and as soon as it is over, feel comparatively well, generally better than before. The local reaction can be best observed in cases in which the tuberculous affection is visible; for instance, in cases of lupus, changes take place which show the specific anti-tuberculous action of the remedy to a most surprising degree. A few hours after an injection into the skin of the back—that is, in a spot far removed from the diseased area on the face or elsewhere—the lupus begins to swell and to redden, and this it does generally before the initial rigor. During the fever, the swelling and redness increase, and may finally reach a high degree, so that the lupus-tissue becomes brownish and necrotic in places where the growth was sharply defined. We sometimes found a much swollen and brownish spot surrounded by a whitish edge almost one centimetre wide, which again was surrounded by a broad band of bright red.

After the subsidence of the fever, the swelling of the lupus tissue gradually decreases, and disappears in about two or three days. The lupus-spots themselves are then covered by a soft deposit, which filters outward and dries in the air. The growth then changes to a crust, which falls off after two or three weeks, and which—sometimes after only one injection—leaves a clean, red cicatrix behind. Generally, however, several injections are required for the complete removal of the lupus-tissue; but of this, more later on. I must mention, as a point of special importance, that the changes described are exactly confined to the parts of the skin affected with lupus. Even the smallest nodules, and those most deeply hidden in the lupus-tissue, go through the process, and become visible in consequence of the swelling and change of color, whilst the tissue itself, in which the lupus-changes have entirely ceased, remains unchanged. The observation of a lupus case, treated by the remedy, is so instructive, and is necessarily so convincing, that those who wish to make a trial of the remedy should, if possible, begin with a case of lupus.

This specific action of the remedy in these cases is less striking, but is as perceptible to eye and touch as are the local reactions in cases of tuberculosis of the glands, bones, joints, etc. In these cases swelling, increased sensibility,

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and redness of the superficial parts, are observed. The reaction of the internal organs, especially of the lungs, is not at once apparent, unless the increased cough and expectoration of consumptive patients after the first injections be considered as pointing to a local reaction in these cases. The general reaction is dominant; nevertheless, we are justified in assuming that here, too, changes take place similar to those seen in lupus cases. The symptoms of reaction above described occurred, without exception, in all cases in which a tuberculous process was present in the organism after the use of 0.01 cubic centimetre, and I think I am justified in saying that the remedy will, therefore, in the future, form an indispensable aid to diagnosis.

By its aid we shall be able to diagnose doubtful cases of phthisis; for instance, cases in which it is impossible to obtain certainty as to the nature of the disease by the discovery of bacilli or elastic fibres in the sputum or by physical examination. Affections of the glands, latent tuberculosis of bone, doubtful cases of tuberculosis of the skin, and similar cases, will be easily and with certainty recognized. In cases of tuberculosis of the lungs or joints, which have been apparently cured, we shall be able to make sure whether the disease has really finished its course, and whether there be still some diseased spots from which it might again arise as a flame from a spark hidden by ashes.

Of greater importance, however, than its diagnostic use, is the therapeutic effect of the remedy. In the description of the changes which a subcutaneous injection of the remedy produces in portions of the skin affected by lupus, I mentioned that after the subsidence of the swelling and decrease of the redness the lupus tissue does not return to its original condition, but that it is destroyed to a greater or less extent and disappears. Observation shows that in some parts this result is brought about by the diseased tissue becoming necrotic, even after but one sufficiently large injection, and at a later stage it is thrown off as a dead mass. In other parts, a disappearance or, as it were, a necrosis of the tissue, seems to occur, and in such case the injection must be repeated to complete the cure.

In what way this process of cure occurs cannot, as yet, be stated with certainty, as the necessary histological investigations are not complete; but this much is certain, that there is no question of a destruction of the tubercle bacilli in the tissues, but only that the tissue inclosing the tubercle bacilli is affected by the remedy. Beyond this there is, as

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is shown by the visible swelling and redness, considerable disturbance of the circulation, and, evidently, in connection therewith, deeply-seated changes in its nutrition, which cause the tissue to die more or less quickly and deeply, according to the extent of the action of the remedy. To recapitulate, the remedy does not kill the tubercle bacilli, but the tuberculous tissue, and this gives us clearly and definitely the limit that bounds the action of the remedy.

It can influence living tuberculous tissue only, and has no effect on dead tissue; as, for instance, necrotic cheesy masses, necrotic bones, etc., nor has it any effect on tissues made necrotic by the remedy itself. In such masses of dead tissue, living tubercle bacilli may possibly still be present, and are either thrown off with the necrosed tissue, or may possibly enter the neighboring and still living tissue under certain circumstances of the therapeutic activity. If the remedy is to be rendered as fruitful as possible, this peculiarity in its mode of action must be carefully observed At first, the living tuberculous tissue must be caused to undergo necrosis, and then everything must be done to remove the dead tissue as soon as possible, as, for instance by surgical interference.

Where this is not possible, and where the organism is unassisted in throwing off the tissue slowly, the endangered living tissue must be protected from fresh incursions of the parasites by continuous applications of the remedy. The fact that the remedy makes tuberculous tissue necrotic, and acts only on the living tissue, helps to explain another peculiar characteristic thereof—namely, that it can be given in rapidly-increasing doses. At first sight, this phenomenon would seem to point to the establishment of tolerance; but, since it is found that the dose can, in the course of about three weeks, be increased to five hundred times the original amount, tolerance can no longer be accepted as an explanation. As we know of nothing analogous to such a rapid and complete adaptation to an extremely active remedy, the phenomenon must rather be explained in this way, that in the beginning of the treatment there is a good deal of tuberculous living tissue, and that consequently a small amount of the active principle suffices to cause a strong reaction, but by each injection a certain amount of the tissue capable of reacting disappears, and then larger doses are necessary to produce the same amount of reaction as before.

Within limits, a certain degree of habituation may be perceived as soon as the tuberculous patient has been treated

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with increasing doses, for so soon as the point is reached at which reaction is as feeble as that of a non-tuberculous patient, then it may be assumed that all tuberculous tissue is destroyed. Then the treatment will only have to be continued by slowly increasing doses and with interruptions in order that the patient may be protected from fresh infections while bacilli are still present in the organisms; and whether this conception and the inference that follows from it be correct, the future must show. They were conclusive, as far as I am concerned, in determining the mode of treatment by the remedy which in our investigations was practiced in the following manner. To begin with the simplest case—lupus.

In nearly every one of these cases I injected the full dose of 0.01 cubic centimetre from the first. I then allowed the reaction to come to an end, and then, after a week or two, again injected 0.01 cubic centimetre, continuing in the same way until the reaction became weaker and weaker, and then ceased. In two cases of facial lupus the lupus-spots were thus brought to complete cicatrization by three or four injections; the other lupus-cases improved in proportion to the duration of treatment.

All these patients had been sufferers for many years, having been previously treated unsuccessfully by various therapeutic methods. Glandular, bone, and joint tuberculosis was similarly treated, large doses at long intervals being made use of. The result was the same as in the lupus-cases—namely, a speedy cure in recent and slight cases, slow improvement in severe cases.

The circumstances were somewhat different in phthisical patients, who constituted the largest number of our patients. Patients with decided pulmonary tuberculosis, are much more sensitive to the remedy than those with surgical tuberculous affections.

We were obliged to diminish the dose for the phthisical patients, and found that they almost all reacted strongly to 0.002 cubic centimetre, and even to 0.001 cubic centimetre. From this first small dose it was possible to rise more or less quickly to the amount that is well borne by other patients. Our course was generally as follows: an injection of 0 001 cubic centimetre was first given to the phthisical patient, and from this a rise of temperature followed, the same dose being repeated once a day until no reaction could be observed. We then increased the dose to 0.002 cubic centimetre, until this was borne without reaction, and so on, in-

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creasing by 0.001, or at most, 0.002 to 0.005, cubic centimetre.

This mild course seemed to be imperative in cases in which there was great debility. By this mode of treatment the patient can be brought to tolerate large doses of the remedy with scarcely a rise of temperature. But patients of greater strength were treated from the first partly with larger doses and partly with frequently repeated doses. Here it seemed that the beneficial results were more quickly obtained. The action of the remedy in cases of phthisis, generally showed itself as follows: Cough and expectoration were generally increased a little after the first injection, then grew less and less, and in the most favorable cases entirely disappeared. The expectoration also lost its purulent character and became mucous. As a rule, the number of bacilli decreased only when the expectoration began to present a mucous appearance. They then entirely disappeared, but were again observed occasionally until expectoration completely ceased. Simultaneously the night-sweats ceased, the patients' appearance improved, and they increased in weight within from four to six weeks.

Patients under treatment for the first stage of phthisis, were freed from every symptom of disease and might be pronounced cured; patients with cavities not yet too highly developed, improved considerably and were almost cured, and only in those whose lungs contained many large cavities could no improvement be proved. Objectively, even in these cases, the expectoration decreased, and the subjective condition improved. These experiences lead me to suppose that phthisis in the beginning can be cured with certainty by this remedy. This statement requires limitation in so far as at present no conclusive experiences can possibly be brought forward to prove whether the cure is lasting.

Relapses naturally may occur, but it can be assumed that they may be cured as easily and quickly as the first attack. On the other hand, it seems possible that, as in other infectious diseases, patients once cured may retain their immunity; but this, too, for the present, must remain an open question. In part, this may be assumed for other cases, when not too far advanced; but patients with large cavities, who suffer from complications caused, for instance, by the incursion of pus-forming micro-organisms into the cavities or by incurable pathological changes in other organs, will probably obtain lasting benefit from the remedy in only exceptional cases. Even such patients, however, were benefited for a

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time. This seems to prove that in their cases, too, the original tuberculous disease is influenced by the remedy in the same manner as in the other cases, but that we are unable to remove the necrotic masses of tissue with the secondary suppurative processes.

The thought involuntarily suggests itself that relief might possibly be brought to many of these severely-afflicted patients by a combination of this new therapeutic method with surgical operations (such as the operation for empyema), or with other curative methods; and here I would earnestly warn people against conventional and indiscriminate application of the remedy in all cases of tuberculosis. The treatment will probably be quite simple in cases in which the beginning of phthisis and simple surgical cases are concerned, but in all other forms of tuberculosis, medical art must have full sway by careful individualization and making use of all other auxiliary methods to assist the action of the remedy.

In many cases the decided impression was created that the careful nursing bestowed on the patient had a considerable influence on the result of the treatment, and I am in favor of applying the remedy in proper sanataria, as opposed to treatment at home and in the out-patient room. How far the methods of treatment already recognized as curative, such as mountain climate, fresh air treatment, special diet, etc., may be profitably combined with the new treatment, cannot yet be definitely stated, but I believe that these therapeutic methods will also be highly advantageous when combined with the new treatment. In many cases, especially in the convalescent stage, as regards tuberculosis, of the brain and larynx, and miliary tuberculosis, we had too little material at our disposal to gain proper experience.

The most important point to be observed in the new treatment is its early application. The proper subjects for treatment are patients in the initial stage of phthisis, for in them the curative action can be most fully shown, and for this reason, too, it cannot be too seriously pointed out that practitioners must in the future be more than ever alive to the importance of diagnosing phthisis in as early a stage as possible. Up to the present time the proof of tubercle bacilli in the sputum was considered more as an interesting point of secondary importance, which, though it made diagnosis more certain, could not help the patient in any way, and which, in consequence, was often neglected.

This I have lately repeatedly had occasion to observe in

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numerous cases of phthisis, which had generally gone through the hands of several doctors without any examination of the sputum having been made. In the future this must be changed, A doctor who shall neglect to diagnose phthisis in its earliest stage by all methods at his command, especially by examining the sputum, will be guilty of the most serious neglect of his patient, whose life may depend upon the early application of the specific treatment. In consequence, in doubtful cases, medical practitioners must make sure of the presence or absence of tuberculosis, and then only will the new therapeutic method become a blessing to suffering humanity, when all cases of tuberculosis are treated in their earliest stage, and we no longer meet with neglected serious cases forming an inextinguishable source of fresh infections. Finally, I would remark, that I have purposely omitted statistical accounts and descriptions of individual cases, because the medical men who furnished us with patients for our investigations have themselves decided to publish the description of their cases, and I wished my account to be as objective as possible, leaving to them all that is purely personal.

Proceedings of Societies, Boards, etc

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

The Third Annual Session of this Association was held in Atlanta, Ga., November 11th, 12th, and 13th, and was a great success in every respect. It was presided over by the President, Dr. George J. Engelmann, of St. Louis, Mo., whose extensive influence added much to the success of the session. Dr. W. E. B. Davis, of Birmingham, Ala., filled his place of Secretary most efficiently. Indeed, without him, the Association would scarcely have been such an one as it is—distinguished among the organizations of this country.

Mayor Glenn delivered the Address of Welcome on the part of the citizens of Atlanta, which was appropriately responded to by Dr. R. B. Maury, of Memphis. Immediately thereafter, the reading of papers was called for.

Dr. R. B. Maury, of Memphis, Tenn., read a paper on

How Shall we Treat our Cases of Pelvic Inflammation?

The paper gave a comprehensive resumé of the pathology of chronic pelvic inflammation as it has been clearly demon-

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strated by Bernutz, by Polk, and Coe and others, and by the results of abdominal section. This pathology is that of pelvic peritonitis, dependent on tubal disease—not cellulitis. The author declared the term chronic cellulitis a misnomer—a pathological condition which existed only in the imagination of the physician—a term which had been productive of pernicious results in practice, and which should no longer be used in connection with non-obstetric chronic pelvic inflammation.

When the pathology rests upon such positive and abundant evidence, the question might be asked, Why re-open a discussion upon it now? Because it is evident from our Society proceedings and hospital reports, that great confusion exists in the medical mind to-day in regard to it. Dr. Byrnes' case, discussed in the New York Obstetrical Society during the present year, was taken as an illustration. In speaking of such cases, the great tendency to relapsés in chronic pelvic inflammation, was illustrated by two cases in which pus tubes were found five and seven years after attacks of peritonitis, and when it was supposed the patients were entirely restored to health.

As to treatment, the writer admitted that by non-surgical therapeutic measures, large intra-peritoneal exudations are often absorbed, and even some tubal and ovarian inflammations entirely disappear and recovery seems complete. But this is the exception, and by no means the rule. For the radical cure of chronic pelvic inflammation non-surgical treatment fails in the majority of the cases. A great many women suffering to a moderate degree, continue to do so in spite of the best directed non-surgical measures, and perhaps wisely elect not to undergo operation. As a rule, the only radical permanent relief is afforded by removal of the diseased appendages. The treatment of pus collections, of course, requires abdominal section.

Discussion was participated in by Drs. Campbell, Price, Hardon, Potter, McNulty, Reed, Ricketts, and Engelmann.

With but one exception these gentlemen supported Dr. Maury's statement, that so-called cellulitis was very uncommon. Dr. Engelmann thought that in certain extreme cases, the symptoms of cellulitis existed, but in a secondary form.

The gentlemen agreed that in the majority of cases of pelvic inflammation, operative interference is required. Of course, surgical instrument should not be resorted to unless the case is such as to clearly establish its necessity. Dr. Price is a pronounced advocate of the use of the operating knife.

The next paper on

Abdominal and Pelvic Surgery in America,

Was read by Dr. Joseph Price, of Philadelphia, Pa., and is promised for our January, 1891, number.

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The next paper was on

Supra-pubic Cystotomy for Relief of Enlarged Prostate.

By Dr. W. H. H. Cobb, of Goldsboro, N. C. He reported the case of R. W. E., farmer, married, age 49, rheumatic diathesis, who dates his bladder troubles to 1881, by carelessly allowing over-distension of bladder. In 1882, he had an attack of nephritic colic and passed small calculus, and has had slight symptoms since, passing dark, gritty deposits. In 1887, passed dark, gristly, bloody substance, size of cow-pea, accompanied by much pain and bloody urine, and since has suffered much with cystitis, which of late had become quite severe; having great pain in urinating and defecation, much blood, pus and mucus in urine. So great were his pains in efforts to relieve bladder and bowels, that night after night was spent in walking over his premises with groanings sufficient to disturb his neighbors, pain in hypogastrium and in glans penis, with weight and pain at rectum, with sudden arrest of urine, which change of position would often relieve. This was his condition when he consulted Dr. Cobb in June last, after taking numerous patent medicines, as the prescriptions of regular physicians had failed to give relief. From this history vesical calculus was suspected, but the sound failed to reveal stone. A digital anal examination disclosed the presence of greatly enlarged right lobe of prostate—hard, indurated, lobulated and exceedingly sensitive. Dr. Cobb thought that the stone was in the post prostatic pouch beyond reach of the sound, as his history of nephritic colic and passage of calculus with symptoms warranted such belief. His condition was growing so serious, that Dr. Cobb feared further delay would result in ureto-pyelo nephrosis. So, after consultation with Dr. Cobb, Jr., and by letter with Dr. Hunter McGuire, it was decided that supra-pubic cystotomy held out the only hope for permanent relief.

On the night of June 22nd, saline cathartic was given, followed by copious hot-water enema next morning, and five grains of quinine at 5, 6, and 7 o'clock, On 23rd, shaved all hair from umbilicus to pubic bone, washed parts with nail brush, using hot water and soap, and then 1:2000 bichloride solution, and cleansing and disinfecting hands with same. Placing patient under the influence of chloroform, with Drs. J. F. Miller, Thos. Hill, M. E. Robinson, and W. H. Cobb, Jr., to assist, the writer washed out the bladder through a soft catheter with four per cent. boracic acid solution until the fluid returned clear and odorless. As substitute for rectal bag, he inserted up rectum after dilating same, a soft rubber gum, inflatable pessary with stem attached, introducing about 10 f℥ warm water; 4 per cent. solution of boracic acid, was next thrown into the bladder through soft catheter and penis tied, distending bladder, so as to be felt above pubis.

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Instruments were kept in a 1.40 carbolic acid and water solution. An incision three inches above symphysis pubis was made down to the pubic bone through fat and cellular tissue to linea alba, through which incision was shortened half inch from above. Recti muscles were next separated with handle of scalpel down to fascia transversalis, carefully keeping in median line. Two right angle retractors were now introduced to separate recti muscles, and fascia transversalis was divided, shortening the incision another half inch from above; below this the fat and cellular tissue were carefully separated with handle of scalpel until bladder was reached, when it was hooked up with tenaculum and scalpel thrust in low down, followed by left index finger or withdrawal of scalpel, and bladder thoroughly exposed. Dr. Cobb was disappointed in not finding stone in the cul-de-sac posterior to the enlarged prostate, as the previous history of renal calculus, with severe cystitis, pains in glans penis, sudden arrest of flow of urine, etc., seemed to warrant the belief in the presence of stone in the bladder, notwithstanding the failure to locate it with the sound.

Finding no foreign body, the bladder was thoroughly irrigated with antiseptic solution, and a No. 15 American scale soft rubber catheter was introduced into the bladder through the abdominal incision, placing the distal end in a cup by the patient's side. Three stitches were next taken through the skin, only to approximate the gaping edges of the wound, and it was then dressed antiseptically. Iodoform bichloride gauze and absorbent cotton were used. The catheter seemed to excite vesical tenesmus to such a degree that it was frequently removed, and a large flat sponge used to absorb the constantly dribbling urine, being easy to cleanse, render antiseptic, and replace by the patient whenever it was saturated with urine. At no time did the pulse exceed 82 per minute. Temperature arose to 100½° F. on the following evening, but was normal on third day, and both pulse and temperature remained normal after third day. Hot water enema was used daily, both to facilitate inoculation of bowels and reduction of enlarged prostate. For two weeks the bladder was washed out daily with 4 per cent. solution of boracic acid, and for the next two weeks was irrigated every other day. About two weeks after operation, the patient's urine ceased to dribble, and was drawn by patient when the bladder felt uncomfortable by inserting a soft catheter through the abdominal fistula, thus giving urethra perfect rest. Two weeks after operation Dr. Cobb introduced a hard rubber tube, size fifteen American scale, two and one-half inches long, through artificial urethra, and allowed it to remain in almost continuously, the patient withdrawing plug about every three hours to relieve bladder. When the patient would stoop over or sit down, suddenly the recti muscles would contract so strongly as to

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expel this rubber tube, and great pain would be experienced in re-introducing it, so great was contraction of these muscles.

At no time was the patient able to relieve his bladder through the artificial urethra save through a tube or catheter. Two months after the operation (August 23rd), finding the prostate normal in size and consistence, and no symptoms of cystitis, etc., the plug was withdrawn and the fistula allowed to heal, which it did in about ten days. Patient urinates and defecates without pain or inconvenience; expresses himself as entirely relieved, and is at this writing, November 1st, following his usual avocation.

The paper was discussed by Drs. Lydston, Price, J. D. S. and W. E. B. Davis, Baxter and McRae.

Inflammation in and About the Head of the Colon

Was the subject of a paper by Dr. L. S. McMurtry, of Louisville, Ky. He said the teachings found in systematic surgical and medical treatises upon inflammation, and its results in and about the caput coli are positively misleading. This is true as to pathology treatment, and even as to the anatomy and relations of the cæcum and its appendix. Inflammatory changes in the vermiform appendix are, in almost every case, the origin and seat of the inflammatory diseases about the caput coli. Inflammation of the cæcum is very rare, yet the testimony of surgeons and pathologists is abundant, that in a certain proportion of cases, cæcitis, with perforation, occurs without involvement of the appendix. Regnier, in 1886, did an abdominal section on a case presenting symptoms of intestinal obstruction with peritonitis. At the autopsy cæcitis with perforation was discovered. In 1888, the writer operated in a case of perforative cæcitis and sutured two perforations in the cæcum. His patient recovered and was present at the American Medical Association that year.

Fecal impaction has been mentioned by surgical writers as a cause of inflammation about the head of the colon. Pain over the cæcum, with a fecal mass perceptible on pressure, often occurs, but is rarely, if ever, associated with peritonitis. Dr. McMurtry recently saw a case (middle aged woman) with Dr. H. H. Grant, of Louisville, in which a localized peritonitis existed in the right iliac fossa, with a well defined firm tumor. Abdominal section was done, and instead of appendicitis, they found cancer of the caput coli. Irrigation and drainage rescued the patient from the immediate danger begotten by active peritonitis. The engrafted peritonitis presented the symptoms of an acute condition. Malignant disease of the cæcum has not, so far as the writer is aware, been mentioned by writers upon this subject as a probable condition in the diagnosis of deep-seated inflammations of the right iliac fossa.

The decision to operate should be determined more by the

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grade of the inflammation than by the time it has existed. When a diagnosis has been made, and three days have elapsed without subsidence of pulse and temperature, operation should be done.

The mortality of appendicitis as heretofore recorded is of extreme severity. Fitz, who has recorded the largest number of cases, says: "Seventy-four per cent. recovered and twenty-six per cent. died. About one-half of these were treated medically and the other half surgically." This, of course, indicates that those treated surgically were operated upon late in the disease, and we all know this means that the patients were practically moribund. The mortality of the late operations has the enormous mortality of forty per cent. Every case of appendicitis passes through the great danger of an unprotected perforation before reaching the comparatively safe condition of abscess.

The author submitted the following conclusions:

1. Inflammation about the caput coli, is, as a rule, inflammation of the appendix.

2. A certain proportion of cases will recover spontaneously by resolution. With these, recurrence of the disease is common.

3. In the larger portion, the disease will endanger life, and may at any moment assume a condition practically hopeless.

4. Early operative interference involves less danger than delay, and should be resorted to in all cases in which a high grade of inflammation is persistent.

The essentials of the operative technique are, in brief, anæsthesia, quick and thorough work, removal of the appendix, irrigation and drainage. The lateral incision is preferable to the median.

The Address by the President, Dr. Engelmann, delivered at night, on "*The Causes of Ill Health in American Girls, and the Importance of Female Hygiene*," will appear in our January number.

During the Second Day's Session, the general attendance of the local profession was good, both of the Medical Colleges of the city being closed. At 1 P. M., the President gave a lunch to the Association, at which were a large number of the profession of Atlanta, etc.

In the paper by Dr. Chas. A. L. Reed, of Cincinnati, O., on

Indications for Operation in Ectopic Gestation,

He assumes that the only proper treatment of ectopic gestation is by laparotomy or, more properly, cœliotomy. But the indications for operation are not definitely decided upon. In fact, he has encountered cases which have been advised against operation until hæmorrhage within the pelvis threatened a fatality, which is but too frequently realized. The only excuse

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for this dilatory practice, is the common confusion with regard to the supposed uniform causal relationship of ruptured ectopic gestation to pelvic hæmatocele, and the division of the latter into "primary" and "secondary" rupture. These terms as used in this connection, may be entirely arbitrary. "Primary" rupture is made to mean rupture beneath the peritoneum, instead of "first" rupture, while "secondary" rupture is made to mean rupture within the peritoneum, instead of "second" rupture; whereas an intra-peritoneal rupture frequently is a primary rupture, when spoken of with reference to the sequence of events in ectopic gestation. There would be no serious confusion even here if we were not also taught to leave extra-peritoneal hæmatoceles alone, to be taken care of by absorption, and if we did not add that, as these hæmatoceles are generally caused by ruptured ectopic gestation sacs, we are to relegate these cases also to the expectant plan of treatment. This conclusion is without warrant, and is responsible for hundreds of deaths annually.

The treatment of ectopic gestation premises its diagnosis. This, in the majority of instances cannot be arrived at, or, if at all, only presumptively; but conditions can be found in the pelvis, which if not conclusive of extra-uterine pregnancy, yet constitute conclusive indications for exploratory operation. The presumption of ectopic pregnancy can be arrived at before rupture, chiefly by a history of previous sterility, by a previous amenorrhœa, followed after a few weeks by irregular hæmorrhage, by increased tumefaction on one side or the other or back of the uterus, and by false decidua within the uterus. The latter fact may be determined by the judicious use of Emmet's curette forceps. The diagnosis after rupture is essentially the diagnosis of internal hæmorrhage. Time wasted either to determine the cause of that hæmorrhage, or to find out if it be "primary" or "secondary," is criminal. The thing to do is to cut down and operate. The position has been taken that time should be taken for the patient to rally from the shock. One of his own cases died simply because he waited twelve hours for reaction. The best way to overcome shock from internal hæmorrhage is to stimulate by giving ether, stop the drain by ligating the bleeding vessels, and rouse the nervous system by washing out the belly with hot water.

After reaction from primary shock, shall we wait for evidences of so-called secondary rupture? In one of his cases suppuration occurred, and in another the blood clot grew until in some weeks it measured nine pints, when he removed it, and still another case emphasized the latter fact. These cases all recovered, but they taught the fallacy of waiting for absorption.

What shall be done with the appendages on the other side? In view of the facts that tubal pregnancy generally depends

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upon desquamative salpingitis, and that this disease is almost uniformly bilateral, the question is at once raised: Is the woman liable to an ectopic pregnancy on the other side. Herman (*Brit. Med. Jour.*, Sept. 27th, 1890), reports such a case, and Tait reports another with death from rupture of the second conception. Leopold Meyer reports another, and refers to verified cases by Veit and Olshausen. There are now at least ten cases on record. From this he concludes that if the patients condition at the time of operation is such as to justify further interference, the appendages from both sides should be removed.

In the presence of rupture, the indications for operation are so imperative that no time should be lost in unnecessary preparation. In this connection, a recently reported case by Manly, of New York, offers points for the severest criticism. A night was waited for a reaction, which was not realized, and a part of the day was squandered in washing the wall-paper to meet Listerian indications while the woman was bleeding into her abdominal cavity, and although by dint of marvelous vitality she recovered, the lesson is none the less impressive that the delay was culpable.

The question of viability of the child has some bearing upon the line of treatment to be adopted. If the case has passed beyond the sixth month, let it proceed to term, but only under the strictest possible surveillance and with preparations at hand to operate at any moment. The statement by Manly that "extra-uterine pregnancy is not attended with great peril to the mothe'r life," (*Internat. Jour. Surg.* Oct., 1890), could be accounted absurd, if its influence were not murderous.

The conclusion arrived at, is clearly expressed by Tait, viz.: "If I ever should make a diagnosis of tubal pregnancy before rupture, I should advise its immediate removal by abdominal section, as being more certain and far more safe than the fancy methods of puncturing the cyst and injecting poisonous fluids, or passing through it some kind of galvanic current."

Dr. Reed's conclusions from the foregoing considerations are:

1. The only proper treatment of ectopic gestation is that by abdominal section.
2. The operation should be done in cases before rupture, so soon as the condition can be presumptively diagnosed.
3. The operation should be done in cases after rupture, so soon as the evidence of internal hæmorrhage become apparent.
4. In cases in which the period of viability has already been reached without rupture, pregnancy should be allowed to advance to term before operation. But only under the closest possible vigilance.
5. In all cases the appendages from both sides should be re-

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moved from both sides, providing the condition of the patient will justify the extension of the operation.

The following is a synopsis of the paper presented on

Local and General Treatment of Gangrenous Wounds and Diseases.

By Bedford Brown, M. D., Ex-President of the Medical Society of Virginia, etc., of Alexandria, Va.

Many years ago, previous to the late war, Dr. Brown determined to institute a series of experiments, to ascertain the capability of local and general treatment of all gangrenous wounds and diseases that came under his care, either for their prevention or arrest. The object was to find local agents possessing active properties as stimulants of vital action in the affected parts; also as means of disinfecting and deodorizing gangrenous sloughs, hastening their final separation, and for the establishment of a healthy basis for granulation. In cases coming under his care, he found the old deodorizers failed to accomplish these objects. He then employed a saturated solution of sulphate of zinc and dilute sulphuric acid as a local application, which seemed to meet all the requirements. The first case in which it was applied was according to the following formula:

℞.—Zinci sulphatis .... ℥j.
Aquæ..... ..... xii ℥j.
Acid sulphuric, dil .... ℥ss. M.

After the free application of hot water—110° F.—this solution was applied every three hours on bats of raw cotton. In the course of two days, the sloughs separated rapidly, leaving a perfectly clean healthy basement for granulation. This solution evidently possesses active antiseptic properties.

It is an admirable deodorizer; it is clean, and cleanses the parts effectually. In cases of great loss of sensation in the parts, weak circulation, reduction of vital action, and depressed vitality, he knows no agents better calculated to arouse nervous action and stagnant circulation, for as soon as the sloughs are removed, and the living basement is exposed, it gives rise to intolerable pain. He has used this solution in all forms of gangrenous wound and disease—some limited, others extensive and associated with septicæmia, with benefit. It possesses no caustic property, and it contracts and shrinks the sloughing tissues rapidly. The influence on the living structures is to stimulate renewed action and sensibility where the capillary circulation is languid, the vaso-motor action sluggish, the circulating blood about to become stagnant. During the late war, he had frequent opportunities of using this preparation, and since. It was cheap, abundant, easy of application, and exceedingly cleanly, and did him good service in his field hospital practice in the Confederate army.

Another most admirable antiseptic disinfectant and stimu-

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lant of vital action found by him invaluable of late years in the local treatment of gangrenous affections is bromine in solutions. In cases of infectious gangrenous inflammation, as in hospital gangrene or gangrenous erysipelas, where the process is propagated by infection, bromine is particularly applicable, as it destroys the infection, subdues the infectious inflammation, and prevents mortification. However we may differ in regard to the peculiar nature or form of infection causing gangrene of the infectious variety, it is well-established that bromine is one of our best disinfectants. He has, in too many instances of sloughing affections, seen it correct them by destroying the infection, to doubt its powers for a moment. The writer has used these different preparations alternately with benefit.

He has invariably used hot water applications in gangrenous affections, from 110° to 120°, made to the parts for fifteen minutes, every one or two hours. Water, at this temperature, is usually agreeable—more grateful and pleasant than otherwise to sloughing parts. Cool applications are unpleasant because of the chilliness they impart. In one case, the patient demanded, and was not satisfied, when the water was below 130°. The writer has used hot water boiled (now termed sterilized water) applications to unhealthy wounds with feeble circulation, and reduction of nervous and vaso-motor action, previous to or after sloughing commenced, for more than forty years, both in civil practice and during the late war in his field hospitals. He saw this practice thoroughly applied and tested in the surgical practice of his preceptor, the late distinguished Dr. Benjamin W. Dudley, of Lexington, Ky. He applied hot water, that had been boiled and reduced to a proper temperature, to all wounds of an unhealthy character, and sloughing affections, traumatic or idiopathic, with benefit in changing the local action. Hot water applications, every two or three hours, in lacerated, gangrenous, or unhealthy wounds, for twenty or thirty minutes each time, should be made. The writer found, in his military practice, hot water applications aided greatly in establishing reaction in wounds accompanied with reduced vascular action and low temperature. In wounds tending to gangrene, there are few better stimulants of vital action than hot water applied in this manner.

In the practice of Dudley, more than forty years ago, he has seen repeatedly hot water that had been boiled and reduced to 105°, applied over and in the eye in violent purulent ophthalmia every hour for fifteen minutes each time, not only subdue engorgement and inflammation, but prevent that most untoward misfortune, sloughing of the cornea. Indeed, with the exception of mercurial cathartics, this was his sole treatment of these cases. The writer has never seen sloughing of the cornea where this method was faithfully carried out.

The death of the tissues in gangrene arises either from ob-

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struction of the circulation, or from infection acting as a destructive agent on the blood constituents in the wounded part, as in hospital or erysipelatous gangrene, or total paresis of the vaso-motor nerves in the injured structures, from the shock of gun-shot wound, or laceration from other injury of a destructive kind. Thus we rarely see gangrene resulting from a clean incised wound, but in parts crushed, torn, lacerated or ground, in which extensive damage to the vaso-motor nerves in the part is sustained.

Hence, the chief objects in treating gangrenous wounds and diseases is to improve the state of the blood, to strengthen the circulation—arterial and capillary; to sustain vaso-motor action; and counteract that tendency to paralysis of this system termed shock, local or general. An abundance of nutritive food, alcoholic stimulants, invigorating and vitalizing remedies, he has seen, in army and private practice, tide over apparently forlorn cases that would otherwise have perished.

Gangrenous patients, provided the stomach is in good condition, can take large quantities of alcohol with benefit. He has given ten grains of carb. ammonia, and two ounces of whiskey every one or two hours with marked benefit in establishing reaction in the threatened collapse from gangrene and pyæmic fever. In those cases of gangrene arising from thrombosis or embolism, he has found carb. ammonia, strychnia, nitro-glycerine, with iron, the best combination for establishing collateral circulation when given in connection with stimulants and nutriment. In cases occurring of recent years, he has found nitro-glycerine, in the fiftieth or one-hundredth of a grain, do well in sustaining the action of the heart and stimulating the capillary circulation. In cases where the action of the heart is feeble, the system threatened with collapse, either from nervous shock or the poison of septicæmia, it acts well as a tonic to the great sympathetic system. He has found this method of managing the septicæmia and depressing influence of gangrene, by experience, the best.

There is no internal antidote to the poison of pyæmia or septicæmia. All that we can hope from internal medication or regimen is to promote blood formation, sustenance of the nutritive functions, and to maintain the action of the great sympathetic system. Antisepsis must come alone from local treatment. There is the field, the true theatre of action for the operation of antiseptic agents and the practice of antisepsis. He believes, from experience, that a vast amount may be accomplished in that way to prevent or correct septicæmia. He has observed, in sloughing affections, that as soon as disinfection of the diseased tissues by bromine, or the saturated solutions of zinci sulphate and diluted sulphuric acid, has been affected, and the vital condition of the parts improved, even to a limited extent, the condition of the general system responds readily and promptly, and not before.

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Hence, in treating the sepsis of gangrene, we must ever be active and untiringly busy in our work of cleansing, disinfecting, and stimulating renewed vital action in the lesion. Nevertheless, he says it is but too true that a very considerable proportion of gangrenous affections prove fatal where there is absolute paresis of the vaso-motor nerves, or profound infection from sepsis.

For the purpose of more clearly illustrating the views presented in his paper, Dr. Brown cites the history of several cases of different varieties of gangrenous wound and disease treated by the various methods mentioned.

CASE I.—*Gangrene of the External Genital Organs in the Female.*—He was called to this case many years ago, which was that of a married woman who had been delivered by a midwife about a week previous. The entire external genitals, from the mons veneris to the perineum, including the labia lymphæ and fourchette, were in a state of gangrene. The organs were enormously swollen, black, and pultaceous, and emitted an ichorous discharge that filled the apartment with an intensely fœtid odor. In this case, hot water applications at 120° were made every three hours, and after each application the saturated solution of zinc sulphate and dilute sulphuric acid was applied freely on raw cotton to the parts. In forty-eight hours, the gangrenous parts had separated, and were being thrown off, leaving a clean, healthy basis ready for granulation. All offensive odors had disappeared, and the serious symptoms of septicæmia, which had threatened the patient, subsided in due time.

CASE II.—This was a case of hospital gangrene of the foot from a severe gun-shot wound of the part, causing extensive laceration, and shattering all the metatarsal bones. This patient, when brought into his field hospital after one of the great battles around Richmond, had all the initial symptoms of gangrene, which was rapidly extending towards the ankle. Hot water applications were made every three hours, and the foot enveloped in cotton-wool saturated with a solution composed of sulphate of zinc ʒj, water ʒxij, dilute sulphuric acid ʒss. This was reapplied every three hours. Stimulants, nourishment, iron, quinine, strychnia, and the carb. ammonia, were prescribed. Although the patient's strength was greatly exhausted, and he had indications of pyæmia, he rallied, the gangrene ceased, the sloughs shrivelled, contracted, and separated, the offensive odor disappeared, and a healthy basis remained. The extensive wound finally healed.

CASE III.—This was a case also of hospital gangrene from grape-shot wound of the thigh. This man, a young Confederate lieutenant, received a wound in battle through the thigh, lacerating the structures extensively. When brought into Dr. Brown's field hospital, a very grave type of inflammation, with extensive œdema, had set in. The color of the parts was

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dark red. There was pyæmia fever, great prostration, and general mental apathy, the usual antecedent and attendant of hospital gangrene. In forty-eight hours extensive gangrene had commenced. Hot water applications were made every two hours. The patient had iron, quinine, strychnia, and the wounded parts were enveloped in cotton-wool, saturated with a solution composed of sulphate of zinc ℥ij, aquæ ℈ij, dilute sulphuric acid ℥ss, to be reapplied every two hours. In a reasonable time, the gangrene ceased to extend, the extensive sloughs came away, leaving a healthy surface, which ultimately healed.

CASE IV.—*Dry Gangrene of the Foot.*—In this case, a male, aged 58, the foot became swollen, inflamed, and painful, from probable occlusion of the popliteal artery, as no pulsation could be detected either in the tibial or peroneal arteries. The patient had been subject to carbuncles—the probable cause of thrombosis or embolism. The gangrenous process covered the entire foot and toes, except the plantar surface. The general condition of the patient was bad. The pulse was feeble and frequent; the complexion sallow. There were rigors and fevers, with copious night sweats. Great depression of mind and total loss of appetite. After the various gangrenous tissues, including skin, muscles and tendons, down to the periosteum, had been dissected away, this was found to be gangrenous also. Neither Surgeon-General Hamilton, who saw the case with him, nor himself, could detect pulsation in the arteries of the leg; hence, the inference that there existed embolism of the popliteal, as the pulsation of the femoral was perceptible above, and that a feeble collateral circulation existed, but not sufficient to support the limb. Dr. Hamilton regarded amputation the only hope of the patient; but the patient was given the full benefit of conservative surgery. He was ordered the tincture of the chloride of iron in full doses, the one-hundredth of a grain of strychnia, and the same quantity of nitroglycerine every three hours, and quinine for the purpose of establishing capillary circulation by arousing vaso-motor action, and increasing the collateral circulation, and arresting gangrene. The saturated solution of zinc sulphate and dilute sulphuric acid was applied to the diseased parts; also frequent hot water application at 130°. The aspect of the parts improved under this treatment, but at certain points where the sloughs had separated, the solution excited intense pain, and had to be discontinued. A solution of bromine, containing ℥ij to ℥xij of water, was substituted. The bromine application was exceedingly soothing, and acted as an admirable antiseptic disinfectant and stimulant of vital action in the parts. The gangrenous form of inflammation was duly subdued, the local infection corrected, and the extensive gangrene arrested. When all sloughing tissues had been thrown off, a clean basis was left, with a fair degree of circulation; but a portion of the

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tarsal, all the upper surfaces of the metatarsal, and the phalanges, were left bare. Under the influence of the local and general treatment, granulations developed rapidly, healthy, vigorous, and florid, and full of blood, indicating, if our conjecture was correct, that a sufficient collateral circulation had been established to arrest gangrene and repair damages. All the exposed bones were finally covered with newly-formed tissue, and the large wound healed perfectly. But it appeared subsequently that at several points there were necrosed bone underneath the newly-formed cicatrix, more particularly the articular heads of some of the metatarsal bones, causing ulceration and exposure of the dead bones. To these necrosed points of bones applications were daily made of dilute muriatic acid of the officinal strength. This has been Dr. Brown's treatment of necrosis of bone for years past, and the results have been good. He says that it is surprising how rapid the phosphates and carbonates of lime of the necrosed form are dissolved, disintegrated, and converted, by the action of the muriatic acid, into the chlorides, and removed. After the disintegration of the dead bone at these points, granulation would again form and heal over the openings.

CASE V.—This was a case of genuine gangrenous phagedæna of the penis from chancroid. In this case there was gangrene of the prepuce, glans, and the skin on the dorsum. The general condition was bad. The local treatment consisted of frequent hot water applications, followed by a solution containing zinc sulphate 3ss, water ʒj, dilute sulphuric acid 3ij, applied every four hours. The patient took thirty drops of tincture of iron and five of dilute muriatic acid every three hours, with stimulants and nourishment. In the course of ten days, the offensive odor had ceased, the gangrene had been arrested, the sloughs cast off, and a healthy basis exposed. The glans (in part), prepuce, and skin on the dorsum sloughed, and the parts healed ultimately.

Gangrenous Carbuncle.—The carbuncle in this case was very extensive, covering the entire back oi the neck. The entire mass of tissue, down to the spinous processes of the cranial vertebræ, became gangrenous. A solution, containing zinc sulphate 3j, water ʒj, dilute sulphuric acid 3ss, was applied on absorbent cotton every three hours, and also injected into the sloughing tissue. The oil of turpentine was also applied at intervals. The condition of the patient was extremely protracted; consequently, he took twenty drops of the tincture of the chloride of iron, one-hundredth of a grain of strychnia, the same of nitro-glycerine, and minute doses of quinine, at intervals of three hours, in connection with an abundance of stimulants and nourishment. The local and general treatment in this case established reaction, and enabled the system to

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throw off the sloughs, and finally to heal the deep and extensive cavity.

In conclusion, Dr. Brown urges discrimination in the adaptation of the method of treatment adopted in gangrenous affections to the variety, form, and origin of the disease. He says there are types of gangrene purely septic in origin, in which the corrosive sublimate dressing is applicable. There are other cases, as hospital or camp gangrene, or gangrenous erysipelas, in which bromine surpasses all other agents. Then there are cases either of a traumatic or idiopathic form, in which the vital and vaso-motor functions of the part are paralyzed, and there is no tendency to establish the line of demarcation, and the tissues are rapidly breaking down. Here, he says, there is needed a potent stimuli to vital action, as well as antiseptic influence, as the strong solution of sulphate of zinc and dilute sulphuric acid.

The following is a full abstract of a paper on

Vesico-Vaginal Fistula—Aberrant Cases.

By Dr. Henry Fraser Campbell, of Augusta, Ga. He began by saying, that for any one at this day to give a report of any series of his cases of vesico-vaginal fistula, however numerous and however successful he may have been, would, after the exhaustive reports on the subject of Sims and Emmet and Bozeman, be simply *tiresome*, without adding even information—much less instruction—to this particular department of gynecic surgery. We cannot expect to report new variations in the kind of damage done to the mother during the pressure of the child's head in prolonged labor. When a cannon ball is projected and goes ploughing its way through a farmyard, it is as liable to kill some valued member of the family or some prized animal, as to destroy a chicken coop; so the head detained in the vaginal passage may destroy any of the tissues of the duct, and inflict damage of endless variety: the vesico-vaginal septum, the recto-vaginal wall, the urethral canal or the ureters, may any one of them, or all of these parts be involved in the *slough*, which afterwards is to bear evidence of the destructive impingement upon soft tissues that have been compressed too long, "between the upper and nether millstones" of the fœtal head on one side, and of the pelvic bones on the other. We cannot, therefore, report anything new or unexpected in the character of the cases or of the locality, or of the extent of the damage done.

Again, no one now can expect to improve on the *technique* of the operative procedures applicable for the cure of vesico-vaginal fistula. The only treatment is, at best, merely a matter of technique—and of a technique so ingenious, so complete, so well understood, and so *fixed*, that nothing can be suggested for its variation or improvement. Sims and Emmet and Bozeman, and Simon, of Germany, so put it out of their hands in a

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state of completeness, that no subsequent suggestion can be made that can be regarded as an improvement on their ingenuity. Dr. Emmet, in his admirable volume devoted to this subject, remarks, that "there seems to be no reason why the treatment of vesico-vaginal fistula should have remained so long in the hands of comparatively a few specialists." Soon after the date of the perfecting of these operations by Sims and Bozeman, I began to accept such cases as were sent to our Infirmary for negroes, then in charge of my brother, the late Dr. Robert Campbell and myself—and in private practice. In this way my experience in the several improved methods, amounted to over sixty operations, representing by no means, however, sixty *cures*, or even sixty patients. Being encouraged in those early days by the statement of Dr. Sims, that he had cured his first case after forty failures, I continued to persist in repetitions, and some of my successes represent in my notes as many as two, and others even six, distinct operations —though more recently my patients are often cured by a single suturing. What may be called the "*episodes*" in the history of such a long experience and observation of cases of vesico-vaginal fistula, have varied greatly in several respects —sometimes in the condition of the damaged canal, requiring operative expedients for the securing of complete retentive union of the lips of the rent; sometimes in difficulty in deciding on the success of the results obtained, and again strange and unexpected *occurrences* that defied all my efforts at interpretation in accounting for their existence, or in dealing with them.

Having had to perform one of these supplementary operations on an *aberrant* case of vesico-vaginal fistula the day before coming to this meeting of the *Association*, I am reminded of others—all differing from this one in their nature—and I may feel excused in grouping them together under the class of "*aberrant cases of vesico-vaginal fistula*," and in presenting them in a brief report to this Society, as having in one way or another a practical bearing on the management of this deplorable result of delayed parturition. Beginning with the above case, I can group under one common condition several others occurring at distant periods of my experience, from which practical conclusions may be deduced.

CASE I.—Mrs. J. T., Columbia Co., Ga., with large vesico-vaginal fistula involving destruction of large portion of vesico-vaginal septum, leaving neck of uterus and os uteri in the line of the posterior or distal lip, or border of the rent—the neck turning constantly into the acvity of the bladder. Injury was done in her last labor some three years previous. The operation was performed in usual manner, using the posterior lip of the uterus as a portion of the line of union, thus turning the entire neck of the organ into the vagina. Stitches removed

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on the fourteenth day. Union found to be complete throughout the entire line of sutures. The patient discharged one week after removal of sutures. She returned in three weeks, complaining that her clothes were found soaked with urine at night and that she was conscious of a discharge of urine from the vagina often in the day-time. She was carefully examined, and with the most careful examination, no failure of firm adhesion could be found along the line of union; nor could anything but the most perfect result be discovered.

November 2nd, 1890, Mrs. T. returned and insisted upon another examination. We now found urine oozing from a portion of the wall of the vagina, anterior to the line of the union of the former large fistula. The opening was valvular, and even a small pocket-case silver probe could not be passed through it into the bladder. This second fistula was pared carefully and closed with four sutures and Bozeman's button and perforated shot. The catheter has not been used to empty the bladder except during the first two days after the operation, and the union seems complete, as no leaking occurs even when the bladder is fully distended. Unquestionably, the minute fistula existed at the time of the closing of the larger rent, but could only be discovered after that was cured, so as to allow of distention of bladder.

Remarks.—There are but three or four conditions or causes by which we may account for the bladder failing to retain urine after successful closure of a vesico-vaginal fistula. They are:—

1st. Contraction and loss of capacity of the bladder from long existence of the rent which has prevented any filling and distention of the cavity. In consequence of this loss of capacity, the patient must either micturate frequently voluntarily or the water will be passed at night involuntarily during sleep and wet the bed clothes. I have had this experience in several of my successful cases—the difficulty being removed by directing the patient to allow the bladder to be distended with urine during the daytime till it had regained its capacity.

2nd. Irritability of the bladder from cystitis or presence of calculus or a portion of suture left after the operation. I have had cases in each one of the foregoing conditions accounted for in the apparent failure of my operation. The cause of the discharge being sometimes very difficult, develops even after repeated and most careful and thorough examinations.

3rd. The turning of the entire cervix uteri into the cavity of the bladder, its presence giving rise, for a time, to irritability of the bladder, and causing non-retention and apparent failure of the union by operation.

CASE II.—The case above referred to was that of a colored woman 22 years of age; primipara. The sloughing had been very extensive, and from cicatricial deposits, and the impracticable condition; otherwise of vaginal cavity, it was found best

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without prolonged preparatory operative treatment to extricate the cervix from the cavity of the bladder into which it had been forced and firmly bound. The operation seemed fairly easy on the plan adopted, and almost impracticable on any other.

In this case, therefore, the posterior lip of the cervix uteri was sutured with silver wire to the proximal edge of the pared rent in the septum. The operation succeeded perfectly and retention of urine was complete, the woman being perfectly and permanently cured of the abnormal leakage of urine. In some months after the operation, this woman complained of much vesical irritation, and had constant and persistent micturition, especially at the approach of and during menstruation—the discharge of which last, was discharged through the urethra even after healing of this fistula. The use of sedatives with alkaline remedies, and, I suppose, with lapse of time, so freed my patient from the inconvenience above described. I may mention as an amusing circumstance, that this woman, who was an unmarried woman, came to me some months after, and in an alarmed and confidential manner, asserted that she greatly feared she was again pregnant! I assured her that she need not be alarmed in the least, as I was certain her suspicions were entirely groundless.

Among the cases I have classed in this paper as "aberrant," I will mention one of *calculus in the bladder*, which I reported in 1876, at the first meeting of the American Gynæcological Society in New York, and which with considerations pertaining thereto, will be found in Vol. I, of the *Transactions* of that Society. In this case, there was great irritability of the bladder and frequent discharge of urine, leading to the suspicion of a failure of union by the operation. On examination, no such failure existed, but the discharge of the urine and irritability was found to be due to the existence of a large calculus in the bladder, which had been pocketed during the contracted condition of the cavity during the fistula, and which I think I prove by the argument, existed at the time of the parturition, during which the accident of the fistula had been produced, doubtless had contributed to its formation. Cystotomy was performed and the stone removed, and the fistula was again successfully operated on without any aberrant symptoms.

The last aberrant case of vesico-vaginal fistula in my own experience that I will mention to this meeting, is one in which the discharge of urine, after an otherwise successful operation, was due to the very unusual circumstance of *one of the ureters*, which had been involved in the slough of a very large fistulous opening, being so related to the line of union by sutures, as to *open* and discharge the urine from that kidney into the vagina instead of into the bladder.

CASE III.—N. T., colored, aged 20 years, primipara. Rent

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in vesico-vaginal wall very large; thirteen silver wire sutures required; closed with Bozeman's button, held by perforated shot—line of union curved convexly forward. The rent was entirely closed by the first operation, but it was found that a pretty constant discharge of urine was taking place from the vagina, and that during the night the woman's bed clothes were invariably saturated. For a long time, and after repeated examinations, my brother, the late Dr. Robert Campbell and myself concurred in the conclusion that the discharge was due, as in several other cases observed by us, to a contracted condition of the bladder and loss of its capacity, owing to the long existence of the fistula. In one of the repeated examinations made by us in a bright light, we observed a fine, almost thread-like stream of urine to be intermittently thrown into the vagina from a point near the right end or commissure of the line of union. We at once recognized the point of discharge to be the cut end of the right ureter which had not closed and which slightly protruded into the vaginal cavity a little above the level of the cicatrix forming the line of union. A fine silver probe was passed into the tube for an inch or more; this tube was slightly dilated and a grooved probe passed in beneath the mucous lining of the bladder. A narrow bladed bistoury was then passed along the groove of the probe and the wall of the ureter and mucous lining of that portion of the bladder were thus *slit*, so as to make a free opening into the cavity of the bladder. Slight paring and a single suture was made to close the dimple left on the vaginal surface. The suture was removed on the eighth day; the opening was thus carefully closed, and there was no further escape of urine into the vagina. The operation devised in this case was exactly upon the model of the operation used in some cases of salivary fistula resulting from the severing of Steno's duct, by wounds upon the cheek or side of the face. I referred to the above case in a verbal discussion some years ago before the American Gynæcological Society.

In reporting the foregoing selection of cases from the record of my note-book, I have only presented such as I considered unusual and aberrant, presenting only such as would serve to illustrate and also explain that particular sequence which sometimes annoys and even perplexes the gynæcologist, in finding the leakage of urine continuing after his operation in cases in which by the greatest faithfulness he had united the fistula, and yet by the most diligent and faithful search, he has failed to find any opening from which the leakage could find exit from the bladder.

From a consideration of the aberrant cases I have herein presented, we can summarize the following conditions as offering explanation to such a disturbing leakage after successful operations for vesico-vaginal fistula:

The *first* and most frequent cause of such apparent leakage,

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is contraction and loss of vesical-capacity incident to prolonged drainage of the bladder by the fistula.

2nd. Irritability of the bladder from cystitis, causing frequent and even involuntary discharge of urine by the urethra.

3rd. The existence of calculus in the bladder formed either before or after the operation for fistula.

4th. The cervix turned and retained in the bladder.

5th. A minute vesico-vaginal fistula existing at the time of the operation for the principal or large fistula, and only discovered after the distention of the bladder by its closures.

6th. One of the ureters cut during the paring of the posterior edge of the fistula and left in the line of union so as to discharge the urine of one kidney into the vagina instead of into the bladder.

In the paper by Dr. William L. Robinson, of Danville, Va., on

Treatment of General Septic Peritonitis,

He called attention to the cases which tended, by absence of pain and seemingly improved condition after chill and fever, to mislead as to necessity of operating, and instanced two cases of recent date seen in consultation, in which septic peritonitis and secondary abscess existed in spite of the seemingly favorable condition. Often there is an utter disproportion between the pathological condition and the amount of pain and tenderness, a condition so often seen in puerperal peritonitis. Traumatic abdominal injuries, apendicitis and pelvic inflammation are the chief causes of septic peritonitis, while of course any internal or external influence which produces suppuration may be the indirect cause. He agrees with Dr. Lydston that in children, falls, blows, etc., are the causes generally of peritonitis, and that because of age of child, in directing attention to seat of injury, we often diagnose the disease too late. He takes the stand that gonorrhœa is a frequent cause of septic peritonitis; and the reasons why it did not always produce it was that it did not invariably invade the uterus, and even when it entered the tubes, the adhesions to the ovary rendered it self-limiting.

He holds that section, irrigation, and drainage is the treatment, and that where adhesions are extensive, salines should follow the operation, in order that the peristaltic action of the bowel would prevent reformation. Cases occur which, when seen by the surgeon, are too prostrated to undergo a complete operation, and the proper plan is to rapidly do what you can by section, irrigation, and drainage. He instanced a case of recent date in which the patient was saved when seemingly *in extremis*. He urges the surgeon to go prepared to resect, anastomose, etc., as complications may indicate. The Doctor takes the ground that where conditions are diagnosed which will most likely terminate in septic peritonitis, such as recurring

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appendicitis, preventive operations should be done. Where great tympanitis exists, he would adopt Dr. Davis' mode of opening the bowel and flushing it out with hot water.

Vaginal Cystotomy in a Child for Large Stone—Ureter Damaged—Repair—Cure.

During the Afternoon Session, Dr. Thad. A. Reamy, of Cincinnati, reported a case, exhibiting the specimen, in which he *had removed, by vaginal cystotomy, from the bladder of a child six years old, a stone in width 1¼ inches—in length 1¾ inches—weighing 365 grains.* A preliminary report of the case had been made to the Cincinnati Obstetrical Society, and published in the *American Journal of Obstetrics.* The operation for closing the bladder had, however, not then been done. He would have done supra-pubic cystotomy had he suspected, before opening the bladder, the size of the stone. Owing to the smallness of the vagina, much difficulty was experienced in closing the bladder wound, which was not attempted until inflammatory thickening had subsided. Success, however, was attained. The left ureter had been damaged, and the operator had dissected it out and cut away the mucous membrane of the bladder at that point, and turned the free end of the ureter into that viscus. The patient is now well.

Dr. W. O. Roberts, of Louisville, Ky., read a paper devoted solely to his individual experience in the

Extraction of Stone From the Bladder in Females Through the Urethra.

The cases thus treated were six in number. The ages of the patients ranged from fifteen to fifty-six years. Four were married, but two only had borne children. The stones were phosphatic in four cases, uric acid in one, and an encrusted foreign body in another. In two, the bladder symptoms had been preceded by attacks of renal colic. In one, a very hysterical, the stone had for its nucleus a piece of soft wood. In one, the patient had had a vesico vaginal fistula, which had been closed by an operation some months prior to the occurrence of the symptoms of stone. In another, the bladder had been opened by the surgeon in doing an ovariotomy, a year before the stone was discovered. This case presented a peculiar feature—an eczematous eruption in and around the abdominal cicatrix, which appeared directly after the occurrence of bladder symptoms, and which was noticeably affected by the condition of the bladder. This eruption was not influenced in the least by treatment, but disappeared without treatment soon after the stone was removed.

In four of the cases the stones were single; in one there were two; and in one nine—in this case, the patient had passed at various times a number of small stones, from two to seven at a given micturition. These stones varied in size

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from that of a grain of wheat to a grain of coffee. In two years she had collected 184 stones, a number not representing all she had passed.

The extraction was done in every case under chloroform. The patient being profoundly anæsthetized. The urethal dilation was begun with forceps and completed by means of the fingers—the little finger being first introduced, the ring finger next, and finally the index finger. The fingers were well oiled.

In *case 1st*, the stone was found to be almost an inch and a half in diameter. This being thought too large for its safe removal in its entirety, was crushed with the lithotrite and taken away piece meal. In *case 2nd*, the stone was found in the uretha; it proved to be a piece of soft wood heavily incrusted with urinary salts. In *case 3rd*, the stone was spherical and had a diameter of about one half an inch. In *case 4th*, the stone was an ovoid—its long diameter being an inch; the short, three fourths of an inch. In *case 5th*, there were nine stones, the smallest measuring circumbientially two and two and a fourth inches; weight eighty-four grains. The largest measured three and one fourth inches in the greater, and three in the lesser circumference. Its weight was 205 grains. The aggregate weight of these stones at the time of their removal was one half a pound. In *case 6th*, there were two stones. The smaller was about the size of a filbert, and the larger as large as an almond. The smaller was removed in its entirety, but the larger broke under the pressure.

Incontinence of urine followed the operation in only two of these cases, and in these the trouble was temporary, lasting two weeks in case 1st, and about a month in case 5th. In case 1st the lithotrite had been used. Case 5th was the woman who had passed so many stones during a period of several years. This patient had a urethra of large calibre, and partial incontinence of urine existed prior to the operation. Had it not been for the existing partial incontinence, and the patulous, freely dilatable condition of the urethra, the attempt to remove these stones would not have been made.

Dr. William Perrin Nicolson, of Atlanta, read a paper entitled—

"Wet Antiseptic Dressings in Injuries of the Hand."

After dwelling for a short time upon the importance of the subject, both from the standpoint of the future earning capacity of the patient, and the large amount of financial compensation demanded from corporations, he stated that for seven or eight years past he had looked after the surgery of several railroads and manufacturing establishments, and in that time had been called upon to treat more than three hundred hand injuries, representing all grades of injury, from slight contusion to complete destruction of the larger part of the hand. In

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this time he had also had an opportunity to see many cases in which the primary dressing had been done by other hands. His observations had led him to believe that the majority of physicians were far from practicing the conservatism that the hand deserved. Attention was called to the free blood and nerve supply of the part and its well-known wonderful ability to repair destructive injuries if not interfered with too much.

The especial points that were urged in the paper was the doctrine formulated by Vernueil—*never to use a scalpel in a hand injury.* The old teaching that when a finger was crushed you should go far enough behind the injury to secure a sound flap and amputate, was pernicious in the extreme, and had cost thousands of fingers that would have been restored to usefulness.

No man could say positively that such a part would live, and another die, and in uncertain cases the patient was entitled to the benefit of the doubt. Only such parts as were actually destroyed and pulpified should be removed, and all the tissues to come away could be amputated with the scissors.

Projecting pieces of bone could be removed with pliers until reduced to the level of the fleshy parts. In compound fractures, the parts should be coaptated as well as possible, and the line of separation be determined by nature, and under strict antiseptic dressing. Such a slough was harmless. Should the end prove that there was unsatisfactory results, they could then be much more easily and intelligently handled.

Another point to which attention was forcibly called was the utilization of blood-clot in filling up ragged injuries, and, by its substitution, the restoration of lost parts. Where a finger was crushed off, the end should be trimmed with scissors, and the clot used in building up a tissue over the bone.

In reference to dressings, Dr. Nicolson said that he had tried almost all varieties, and had finally obtained the most satisfactory results from keeping the parts constantly bathed in a non-poisonous antiseptic solution. Antisepsis must be secured, and, in the soiled hands of laboring men, no one could confidently rely upon any amount of cleansing, especially when the injury had not been seen at once. This fact had led him to employ a solution that would permeate all of the interstices of the wound, and remain in contact with it.

In dealing with these wounds, they were first cleansed as well as possible, and then bathed in a sublimate solution.

Over all wounds a piece of aseptic rubber tissue or oiled silk was placed, then iodoform and sublimate gauze, and finally over all a covering of rubber tissue, into which, at some convenient point, a small opening was made. The patient was then given a bottle of antiseptic solution, to be carried in his pocket if moving about, and instructed to pour, at frequent intervals, enough into this opening to saturate the dressings. Though any not poisonous antiseptic could be used, he had

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used almost exclusively listerine, combined with a small amount of carbolic acid, in the proportion of half an ounce of the former and half drachm of the latter, in a six-ounce mixture. If there was much pain, a small amount of aqueous extract of opium was added. These dressings were not disturbed until the third day, when they were removed under strict antisepsis, to preserve the integrity of the blood-clot. This was in no way damaged by the constant wetting. Wet dressings were substituted at the end of about a week by the ordinary antiseptic dressings, and kept moist by external covering of rubber tissue. Should sloughing occur, it is kept wet for a longer time with the antiseptic. Under this treatment, pain was reduced to the minimum; suppuration never occurred, and the separation of sloughs was facilitated by the warm moisture.

Dr. J. T. Wilson, of Sherman, Texas, read a paper on

Conservative Surgery in Diseases of the Foot.

He said that injuries of the foot are of frequent occurrence, and of every character, and may result, not only in the loss of the extremity, but life as well. Many feet are sacrificed to a want of patience and a proper management of the injuries received.

Probably injuries of the foot are more serious than those of the hand, because of the larger size of the foot and its greater distance from the centre of circulation, and, consequently, less power to repair mischief. The foot is much more susceptible to suppuration and gangrene, and yet is very amenable to good treatment.

It should ever be the surgeon's earnest aim to save the foot, if it is possible to do so, in a useful shape. With the resources of the present day, the successful treatment of injuries of the foot is rendered more certain and satisfactory than formerly. Some surgeons prefer amputation and treatment of the stump to what may seem to give promise of a prolonged attendance upon slowly-healing accident wounds; but the loss of even a portion of the foot, or of several of the toes, is a privation profoundly felt, and we should not permit our personal preferences to influence our judgment against conservative treatment when there is a possibility of the part being saved, though it may require much labor, patience, and annoyance.

A new principle in what is done is exceedingly rare, but many surgeons think their peculiar modes of doing an operation, or making a surgical dressing, have advantages over any other that they are acquainted with; and it is well that this is so, because it gives the surgeon more self-confidence and self-reliance, and enables him to do greater service to his patients. Then, too, a different application of the same principle will often effect different results; and in this way we often get valuable ideas from the new application of an old principle.

Now that antiseptics are doing so much for surgery in all its

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wide domain, there is scarcely any need of allowing a wound of the foot of a healthy person to suppurate, even though the tissues be much bruised and broken. By careful attention to the part and system, by absolute rest and a judicious dressing, the bruised and mangled tissues will soon regain their normal condition if the blood-vessels be not destroyed and the circulation not entirely cut off. Rest, position, the character of dressing, and condition of the system, all have an important bearing upon the repair of injuries of this organ.

The injury, of whatever nature, more or less irritates the nerves, tendons, and muscular fibres, inducing contraction, which is painful; interferes, in some measure, with the circulation of the blood and nervous fluid, and retards the healing of the wound. It is therefore necessary that complete rest, if possible, be obtained for a sufficient length of time for the work of reparation to begin. Position, bandages, splints, slings, or props, accomplish this end. The circulation may be regulated by gentle, efficient massage, and by changing the position from time to time. It is a matter of much moment to restore the circulation, when practicable, as soon as possible after the injury has been received, and the temperature should be kept at as near normal as we can do it. The foot may be placed on a level with the body, or a little higher; sometimes it can be elevated to a considerable degree with great benefit; at other times, it should be lower than the body. There are times, too, when much good can be accomplished by allowing it to hang down for a short time; as when the circulation is feeble, etc. The strictest attention to minute details is necessary to obtain the best results.

The general system should come in for its share of attention, because if neglected, and if it is not in proper condition, it will be an impediment to the progress of repair.

Attention to the secretions of the bowels and kidneys, to digestion and assimilation, to the functions of the liver, especially in this Southern climate, skin and other organs, is also important.

In contused and lacerated wounds, the best results are obtained by keeping the foot at absolute rest in a comfortable position during the first part of the treatment by cleanliness and by soothing applications.

Punctured wounds of the sole of the foot are generally regarded as more dangerous than in any other part, in proportion to their extent. It is thought they are attended with more complications—more attacks of tetanus resulting, and more trouble in treating and getting the wound to heal. Removal of any foreign substance, antiseptical cleanliness, unirritated and free drainage, will accomplish satisfactory results in nearly all cases.

In gunshot wounds, the parts are generally much lacerated and bruised. We should persevere in our efforts to free the

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wound of every particle of foreign substance, and convert it, as nearly as practicable, into an incised wound. All ragged edges should be clipped off. Ligatures for bleeding vessels and sutures should be thoroughly antiseptic. The fractured ends of bones, and soft parts that are separated, should be nicely coaptated, and thus carefully maintained, until repair has been well begun.

Contusions of the bones are frequently far more serious than those of the soft parts. Inflammation is more liable to set up, with all its consequences—suppuration, caries, and necrosis.

In bad sprains of the foot, immersion in water as hot as can be borne soon after the injury, should be resorted to; and, as the foot becomes accustomed to the heat, boiling water may be added until the temperature of the bath is raised to the highest degree of tolerance. Such treatment will do more than any thing else to relieve the acute suffering and lessen the swelling. This should be followed by a gentle shampooing while the foot is elevated above the level of the body until the surface is quite dry. An equable plaster bandage should then be applied in such a way that the circulation will not be interfered with.

The foot should be placed in a comfortable position and retained for a few days at complete rest. Then the bandage may be removed, and shampooing again instituted. Passive motion should be carefully and gently begun and continued at guarded intervals. This treatment requires good judgment and patience, but is generally very satisfactory in results. A wounded foot should receive antiseptic treatment, whether the skin be broken or not.

The somewhat uncertain state of the surgical mind in regard to the antiseptic treatment of wounds and the choice of an antiseptic, should not have a skeptical effect, and cause us to allow these necessary precautions to fall into neglect. That antiseptic surgery has marked perhaps the greatest advance known to the art, the bold operations of to-day, and the explorations into every cavity of the body, conspicuously testify. Under antiseptics, there are more rapid and ready unions of wounded surfaces, less suppuration, and fewer cases of septic poisoning, than obtained under the old regime.

Drainage is of paramount importance, but tubes should not be left in wounds for too great a length of time nor allowed to irritate them. In cases of suppuration, counter-openings are often necessary.

The application and adaptation of dressings and apparatus should be carefully conducted for each individual case. Poultices should not be allowed to remain too long, as bad results are liable to follow.

Hæmorrhage should be controlled as soon as possible—the parts cleansed of all foreign bodies, such as earth, sand, clothing, detached pieces of bone, and badly bruised, lacerated tis-

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sues. Extreme tension requires incisions and antiseptic irrigation.

Catgut is, he thinks, the best suture for the foot, but sterilized silk or flax-thread will answer an excellent purpose. He deems it an important point to have all threads used for ligatures and sutures previously well boiled and kept immersed in a strong solution of carbolic acid.

Massage is a valuable adjunct to antiseptics in the treatment of wounds. It assists in bringing about absorption of fluids, and in restoring function.

The state of the patient's physical condition, the surroundings to which he is subjected, the character of domestic attention he receives, the mental influence under which he is laboring, and the quality of food supplied, all have an important bearing upon restoration from serious injuries. If blood-vessels and nerves are not so wholly destroyed as to cause the early death of the part, amputation should not be hurriedly performed, even though it seem at first improbable that the foot can be saved. While there is living tissue, it should be given the chance for repair.

Resection of the bones of the foot can frequently be performed with great propriety and with gratifying success. Tendons and nerves can sometimes be sutured with a fair prospect of union. Ulcers can be made to heal by scraping away all necrosed and unhealthy tissue, and rest and antiseptic dressings are essentials. Even extensive burns and frost-bites, resulting in gangrene, if patience and care be exercised in their management, will often terminate surprisingly well without the necessary loss of the entire foot.

The temptation—especially to young surgeons—to make a brilliant operation through some of the joints of the foot, often seems too great to resist; but we should not permit such a temptation to warp our judgment, nor lead us to sacrifice one line of tissue that is not absolutely necessary.

At Night, Capital City Club tendered a reception and banquet, which was quite a society affair.

During the Third Day's Session, Dr. W. F. Westmoreland, of Atlanta, read a paper on "*Stricture of the Male Urethra.*" We are sorry we have secured no notes of it.

Treatment of Varicocele.

After a review of the various methods of operation, Dr. G. Frank Lydston said that he considered the indications for operation to be—

1st. Severe dragging pain and reflex neuralgia.

2nd. Impotence pseudo, or real.

3rd. Ineligibility for public service, such as army and navy in some cases.

4th. Severe scrotal eczema.

5th. Mechanical impediment to manual labor.

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6th. Noticeable and conspicuous deformity.

The ideal operation for moderate-sized varicoceles, is resection of the scrotum. For large varicoceles, is resection of scrotum with preliminary ligation of the veins high up in their straight portion.

Large varicoceles operated upon by resection of the scrotum tend to recur even when the operation is very thoroughly done, hence the author advocates the combined operation. Subcutaneous ligation he believes to be objectionable.

The author relates a very interesting case of hæmidrosis of the scrotum due to varicocele. Subcutaneous ligation was done in this case, and at the same time a urethrotomy was performed. Hæmorrhage from the urethra was severe, and lasted for several days.

Dr. Lydston believes that varicocele is essentially due to a general tropho-neurotic state, and is inclined to think that the causative rôle of masturbation has been assigned undue importance. Thirty-five operations have been done by Dr. Lydston; within the main, excellent results and no deaths. Two cases of resection of the scrotum have recurred. The author insists that too much tissue cannot be removed. Henry or King's clamp is used, but the author claims that any good clamp will answer.

The cautery operation of Pearce Gould is condemned as the most dangerous yet devised. Dr. Lydston urges the observance of rigid asepsis in all operations on varicocele.

Dr. G. A. Baxter, of Chattanooga, Tenn., presented a paper (which will appear in our January number, 1891,) describing "*A New Jacket for the Treatment of Spinal Diseases and Injuries.*"

During the Afternoon, Dr. Hunter P. Cooper, of Atlanta, reported "*A Case of Fracture of the Femur Due to Fragility.*"

Dr. Geo. H. Noble, of Atlanta, read a paper on "*Operations for Procidentia Uteri.*"

Dr. W. Hampton Caldwell, of Lexington, Ky., in his paper on

Rectal Medication in Pelvic Troubles

Endeavored to impress the great advantage derived from the administration of medicines by the rectum in cases of pelvic pains. The absorption is equally as rapid as by the mouth, and the effect is far better, as the stomach is seldom disturbed, and the after effects are not near so marked by nausea, etc. He prescribes ergotin in the shape of rectal suppositories with the best effect in controlling uterine hæmorrhages, etc. Ample clinical experience has established the fact that chloral and opiates act far better and safer when administered by the rectum than by the mouth, and therefore this method for their administration should generally be preferred. He then de-

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scribed the mechanism of pain in the pelvic region, and showed why the rectal administration was superior in application and effect to the administration of the same drug by the mouth.

This paper was discussed at length by Drs. Henry F. Campbell, of Augusta, Ga., and G. Frank Lydston, of Chicago—both gentlemen giving many personal experiences in support of the position taken in the paper. They thought that rectal medication was too greatly neglected, but that it would eventually prove a most necessary and common plan of administration of drugs—especially in cases of pelvic trouble.

Dr. Jas. A. Goggans, of Alexandria City, Ala., contributed a paper on

The Surgical Treatment of Empyæmia.

He said during the last eighteen months he had treated six cases of empyæmia, which developed in the wake of pneumonia, all of which had made perfect recoveries. These patients varied in age from three to fifty-five years. Surgical treatment was the one which had been most successfully employed. Spontaneous cures are so rare that surgical interference was the rule. There were many methods of operating for the removal of pus from the pleural cavity, but they may be classified under two general headings:

1. The closed method, which consists in removing the pus by simple puncture with some kind of trocar or modern aspirator, and allowing the puncture to heal at once.

2. The open method, which consists in making an incision more or less free with the introduction of some kind of drainage tubes to maintain the perfect evacuation of the fluid, and admit of medical washings, and to promote free ingress and egress of air that has been passed through an antiseptic dressing.

The surgical treatment, then, being an absolute necessity, surgeons cannot over-estimate the importance of making the diagnosis certain by resorting to exploratory puncture with a hypodermic syringe. We can assure the patient and friends that no evil results can come from this procedure, and that the prognosis positively depends upon this means of settling the diagnosis.

The following is an abstract of a paper by Dr. Joseph Taber Johnson, of Washington, D. C., on

"A Successful Operation for the Cure of a Strangulated Umbilical Hernia, Complicated by a Large Uterine Myoma."

He was called last May to operate on a lady, aged 47, who lived twenty-three miles in the country, who was suffering from a large umbilical hernia, which had become strangulated. Upon examination he found an immense fibroid extending up under the navel, which he thought would have to be removed

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before he could reduce the hernia. The patient had a pulse of one hundred and twenty, could retain no food, and was constantly vomiting fecal matter. He had her removed to his private hospital in the city, and operated the next morning. Her pulse was then 140.

He first performed supra vaginal hysterectomy. The adhesions were so numerous that at least thirty silk ligatures were left in the abdomen upon bleeding points. The stump was very large and thick, and was secured outside by a Keoberlee serre-nœud. The peritoneum was secured to the stump under the wire, and the abdominal incision was extended up through the hernial ring, when the intestines and omentum dropped back into the abdominal cavity. The slack tissue in the peritoneum and skin was cut away, and the umbilical opening became a part of the abdominal incision and was closed by silk sutures in the usual way. The operation lasted nearly three hours.

The patient did well for two weeks, when a fecal fistula occurred; feces came through the wound for a month, when it finally closed and the patient is now perfectly well. The tumor weighed about eight pounds.

Dr. Johnson has performed supra vaginal hysterectomy eleven times. The first case recovered, but died nine months later of cancer in the cervix. The next three cases died. The last seven cases have all recovered. In one of the successful cases the tumor weighed twenty pounds.

Dr. Johnson thinks that more women die of myomata and their effects than is generally supposed, and that the operations of supra vaginal hysterectomy should be resorted to more frequently. He thinks the prevailing belief that myomata cease to grow after the menopause erroneous. The change of life in these cases is nearly always postponed from seven to ten years, and even then the tumors do not always cease to grow or give rise to dangerous symptoms. Many examples are now upon record in proof of this statement. Tait and others have recorded cases of large fibroids having begun to grow subsequent to the normal change of life.

Dr. Johnson thought electricity of little value in the treatment of bad cases; that it frequently did positive harm, and in his experience whatever good it had done had only been temporary. In some cases local inflammations are caused by it, which make necessary operations later on more difficult and dangerous. The great majority of uterine fibroids happily give rise to but few symptoms and require little or no treatment, but are like the little girl who when she was good was very good indeed, but when they are bad, they are horrid.

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Dr. J. T. Wilson, of Sherman, Texas, presented a paper on **Uterine Moles and Their Treatment.**

In presenting this subject of uterine moles and their treatment—and more especially fleshy moles—in a very brief paper, Dr. Wilson stated that the fact that he had met with a number of cases, induced him to believe that moles are not so rare as the comparatively scant literature relating to them would lead us to think. His reason for bringing up the subject, on this occasion, is to provoke discussion. The cases that have come under his observation have been more troublesome than most writers indicate they should have been, and the hæmorrhages in some of the cases were alarming. All authorities seem agreed upon the etiological and pathological view that a mole is a blighted or altered conception; the ovum having perished, its coverings or the placenta, if formed when this change takes place, become attached to and continues to receive nourishment through the uterine walls, and remains or becomes an organized product until it is thrown off; and this condition is attributable by some to the vitality retained in the villi of the chorion. He has nowhere seen a special cause assigned for the destruction of the product of conception which gives rise to this peculiar disease. It is true some writers describe a hæmorrhage in connection with it and its effusion into the placental tissues, but give no reason for its occurrence. He is inclined to think that a disease of the uterus, especially of the endometrium, plays an important part in the causation in many cases, and may be aided by a debilitated condition of the system. There may be in the early period of conception, a mal nutrition, or the blood supply may be cut off from the ovum, which may be macerated and become absorbed in its own fluid, but continuing to supply the placenta which may go on developing, and at the same time undergoing the change which forms that singular mass called mole. It may go on in this way for months, but he thinks the uterus makes an attempt to get rid of it in a majority of instances before the fourth month, more especially this variety. The hydatiform will frequently go on longer. It is conceded by all writers to be a result of conception.

The symptoms accompanying the presence of moles, are, as a rule, those of pregnancy, and the attempt at expulsion resembles, in nearly every respect, an abortion, except that the adherent mass, in many instances, has to be forcibly removed. There is frequently a dark, grumous discharge, sometimes offensive, just before or about the time of expulsion. The signs of pregnancy frequently continue until about, or shortly before the attempt is made to cast it off, when they cease.

In the cases coming under his observation, the true nature of the trouble was divined before the mass was extracted.

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Some of the patients thought they were pregnant; two had not suspected it, they all had several attacks of hæmorrhage before he saw them, and, in fact, that was the symptom for which he was called in all the cases. The os was sufficiently dilated to introduce the finger and feel the presenting contents. He found it necessary in but one instance to increase the dilation by artificial means. He was never so fortunate in relieving his patients with as little trouble as authors would usually lead us to believe we may expect. The treatment recommended by all, viz: the tampon and ergot, gave him material assistance, but he had in every case to extract the moles with forceps. He has never met with a mole that was lying entirely loose in the uterus, but all that he has treated were more or less adherent to its walls, and most of them to the posterior wall. They had to be taken away by piece-meal and the surface well curetted, washed out, and carbolic acid or Churchill's tincture of iodine applied to the surface. They all required after treatment, because all except one case of hydatiform mole had endometritis and endocervicitis; two had severe cervical lacerations and erosions. Most of his cases had a greater flow than usual at the subsequent menstrual periods until the inflammatory condition was relieved. In two cases, the general health, while not robust, was fairly good; the other patients were more or less delicate—none of them in perfect health. None gave any history of a cancerous cachexia nor of syphilitic taint; one was tuberculous.

Dr. Wilson's experience has taught him to believe, that if these cases do not receive treatment at a proper time, there are two grave dangers to be apprehended, viz: hæmorrhage—which if not an immediate cause of death, is capable of leading indirectly to that end—and septic poisoning.

The following treatment suggested itself to him, which he has followed out. If the cervix is sufficiently dilated and hæmorrhage troublesome, the mass should be promptly removed. If this cannot be done, a hot antiseptic vaginal douche should be given, followed by a careful and efficient tampon, with the internal administration of ergot and anodynes if required, directing quiet, rest, and a simple diet. In from twelve to sixteen hours, the tampon should be removed and the foreign body extracted as completely as practicable. This will require a good stout pair of forceps. He has used the ordinary dressing forceps and placental forceps for the purpose. The surface from which the mole is removed should be well curetted with a wire curette, the uterus thoroughly washed out with a hot solution of bichloride of mercury and Squibb's crude carbolic acid or Churchill's tincture of iodine may be applied to the surface. If much bleeding ensues—this is not usual, but may occur—the application of persulphate or perchloride of iron or hot vinegar gives good results.

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The patient is to be kept in bed as long as the indications in each special case may require. She is put upon a tonic treatment, and hot vaginal antiseptic washes. In from three to five days, in some cases, the curette and use of the bichloride solution may be required again. He has seen but one case of hydatiform mole, which doubtless, as we are taught, is rare. In this case the development of the uterus was unusual and more rapid than in normal pregnancy. There was a distinct sense of fluctuation as if the uterine cavity contained fluid. He believes such moles are expelled with less difficulty, and are not so liable to be attended with so much hæmorrhage as the fleshy mole. Cazeau calls this condition dropsy of the villi of the chorion, and says that the formations are not true hydatids.

The information Dr. Wilson most wished to obtain is the answer to each of these questions: What condition of the patient renders her most liable to the disease? Does heredity have any influence upon it? Does it invariably follow a diseased or debilitated system? Is there any special cachexia of the woman to render her more subject to it? Does cancerous tendency or syphilitic taint have anything to do with it? Are all cases attended with some pathological condition of the uterus? Do they often recur in the same patient? In cases where the attachment has not been separated and hæmorrhage is troublesome, what is the best method of procedure?

Dr. Edwin Ricketts, of Cincinnati, O., presented a special paper on "*Stones from the Gall Bladder*," and exhibited specimens of these stones, which were as hard as rock, but of light weight. These cases are of extreme rarity, but Dr. Ricketts operated on five within seven months. From one person he took a stone weighing 190 grains; from another, a stone of 128 grains weight; from another, one of 170 grains; and from still another, 28 small stones, the aggregate weight of which was 190 grains. Previous to his having taken charge of these cases, three of them had been diagnosed and the affliction pronounced cancer.

This was the last paper read, and the business of *electing officers* was then taken up, with the following result:

President, Dr. L. S. McMurtry, of Louisville, Ky.; First Vice-President, Dr. W. McF. Gaston, of Atlanta; Second Vice-President, Dr. J. T. Wilson, of Sherman, Tex. The following continue through 1891: Secretary, Dr. W. E. B. Davis, of Birmingham, Ala.; Treasurer, Dr. H. P. Cochrane, of Birmingham, Ala.; Judicial Council, Dr. John S. Cain, of Nashville, Tenn.; Dr. Wm. T. Briggs, of Nashville, Tenn.; Dr. Hunter McGuire, of Richmond, Va.; Dr. Virgil O. Hardon, of Atlanta; and Dr. G. J. Engelmann. the retiring President.

Dr. Hunter McGuire was appointed Chairman of the Committee on Arrangements.

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Richmond, Va., was selected as the place of holding the next Annual Meeting, on the second Tuesday in November, 1891.

President McMurtry was escorted to the chair by Dr. V. C. Hardon.

In yielding his seat to his successor, Dr. Engelmann spoke fittingly and gracefully.

After acknowledgments by Dr. McMurtry, the Association adjourned *sine die.*

Editorial.

Koch's Discovery.

We reprint in full from the *Medical News*—which journal, by the way, did a most noteworthy thing in publishing the whole article translated as cabled on the day after publication in Berlin, the last original article by Dr. Koch, describing his method of treating consumption, lupus, etc. We forbear criticism for the present as to the concealment of his method of producing the injecting fluid he uses—hoping that in due time his reason for so doing will appear. Undoubtedly the newspapers have done great harm by exciting expectations as to the certainty of cure of consumption by his method. Experiments with the fluid are now being conducted in London and soon will begin in other countries.

Southern Surgical and Gynæcological Association.

We add a number of extra pages to this number so as to incorporate quite a full report of the scientific proceedings of the Atlanta session of this association. It needs no word of ours to show the superlative good of such an organization. The papers speak for themselves. The session was most harmonious and profitable, and well presided over by Dr. Engelmann who ruled "time" on the speakers without once offending any. Throughout, the members displayed a most earnest spirit. We are afraid, however, from the slim attendance of the local profession on the first day's session that the idea had got current that this was a very exclusive society; but this impression was corrected in time to make the second day's session well attended by the profession of Atlanta. It would have been more in keeping with the wishes of the visiting members to have met more of the local profession during the handsome entertainment at the

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Club. The "lunch" given by the President, however, was a most pleasant social meeting of the doctors. To get up the idea that such a medical gathering is socially exclusive as to the local profession is unfortunate, because one of the best offices of a society of this kind is to interest the physicians in the region in which they meet. The reading of papers was limited to twenty minutes; the discussions to five. Not one incident occurred to interfere with the steady progress of work, the reading of papers, discussions, etc. All in all, this Atlanta meeting was a *great* success. Under the leadership of the President elect, Dr. L. S. McMurtry, of Louisville, assisted by the distinguished ex-Presidents, Drs. Hunter McGuire and Geo. J. Engelmann, and by the untiring, judicious and efficient Secretary, Dr. W. E. B. Davis, of Birmingham, Ala., it is to be hoped that the session in Richmond, in November, 1891, will be as good—it can scarcely be better, nor can any entertainment be more elegant.

The Physicians' All-Requisite Account Book.

Published by Mr. F. A. Davis, 1231 Filbert St., Philadelphia, Pa., is issued in good time to become generally adopted by those of the profession who are waiting for something new, and time and labor-saving in the way of book-keeping. Among the many advantages possessed by this account book, are its completeness without sacrificing anything; need of only one entry; can be commenced at anytime of the year; many more times the number of accounts that are found in any other book of similar size; every account complete on the same page; one person must be sick every day of the year to fill the space for his account; so then ordinarily, the page given to one account is sufficient for years. Send to the popular Medical Publisher for a full descriptive circular. Price of book for 900 accounts, $5.00; for 1,800 accounts $8.00. The book is designed by Dr. William A. Seibert, of Easton, Pa.

Messrs. Charles Lentz & Son, of Philadelphia, Pa.

We wish to apologize for the recent misprint of name of this enterprising firm of makers of surgical instruments, physicians' supplies, etc They have just issued a "special list of new instruments, etc," which is the forerunner of a sumptuous catalogue they are preparing. This "special list" contains descriptions of many things constantly needed by the practitioner. Write to them with postage stamp for a copy of their special list.

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The Physician's Visiting List for 1891,

Published by Messrs. P. Blakiston, Son & Co., Philadelphia, Pa., can now be ordered through booksellers or direct from the Publishers. This 40th annual edition is thoroughly revised, with valuable memoranda, tables, etc. Its claims of strength, compactness, convenience, and durability, besides being the smallest and lightest Visiting List published, seem well-established. Each List has its tuck, pocket, and pencil. Price, regular edition, for 25 patients weekly, $1; for 50, $1.25; for 75, $1.50; for 100, $2. It is also published in two volumes for the year; and there are also "interleaved," "perpetual," and "monthly editions," without dates.

New Orleans Medical and Surgical Journal.

Every month there appears in this journal the advertisement of the *New Orleans Medical and Surgical Journal*, giving the title of the leading original article in its current issue. This is one evidence of the enterprise that has lately distinguished that journal, which improves, if possible, with every number. There is always room for "*the best*," and our handsome contemporary is rapidly approaching that quality.

Budwell's Emulsion of Cod Liver Oil.

We should have noted in our last issue the change of advertisement (page 8) of this most valuable emulsion of cod-liver oil. The combination of the oil with alterative agents greatly improves the palatability and assimilability of this preparation, and hence adds materially to the reconstructive qualities of the oil itself. The firm that prepares this Emulsion has been changed to Budwell, Christian & Barbee, Roanoke, Va.

The Medical Bulletin Visiting List,

Published by Mr. F. A. Davis, of Philadelphia, Pa., possesses the unique feature of requiring the entry of a name only once a month. Those who have used it, like it so much as to adopt it again for the new year. We would advise any one who has never seen it to use it one year, and it is our belief that he will not change it for any other afterwards. It contains much useful printed matter, well-suited to emergency calls, etc. It is printed in three styles: Price of No. 1, for 70 patients daily, $1.25; No. 2, for 105 patients

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each month, $1.50; No. 3, containing removable blank lists, etc., $1.75. A copy of this List has to be seen to be appreciated as its special merits deserve.

Election of Resident Surgeons in the City Eye, Ear, Nose, and Throat Free Hospital of New Orleans, La.

We are requested by Mr. Jos. A. Hincks, Secretary of the City Eye, Ear, Nose and Throat Free Hospital of New Orleans, La,, to announce that on the first Monday in January, 1891, the Executive Committee will elect, upon the recommendation of the medical staff, two *resident* surgeons, upon the following conditions: 1st. They must be graduates of a reputable medical college. 2nd. They must be under thirty years of age. 3rd. They must sign an agreement to serve for one year. The Hospital will furnish only lodging and its unsurpassed facilities for the study of diseases of the eye, ear, nose, and throat. During eleven months. 32,712 consultations were given to 3,206 patients, and over 500 operations of all kinds performed. Applicants should state what other degrees they hold besides their medical degrees. References should also be given. Applications should be in the hands of the Secretary by December 25, 1890.

Our Book Notice Department,

We regret exceedingly to omit from this issue; but it must be apparent that we could not help ourselves in view of the extra size of this number.

Ponca Compound Tablets.

For many months, the Mellier Drug Co., of St. Louis, has been advertising in this journal Ponca Compound Tablets, with formula. We prescribed some of the Tablets a year ago in a case of obstinate ovarian neuralgia, and were so satisfied with the effect that we prescribed them in other cases, and we confess ourselves so well pleased with the results in the general class of cases for which they are recommended that we have grown into the habit of prescribing them where a more specific line of medication is not indicated. We believe we will help many a doctor and patient in making this note. Dr. D. J. Roberts, of Nashville, and Dr. I. N. Love, of St. Louis, are among the prominent members of the profession who have also favorably written upon their value.

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VIRGINIA
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Original Communications.

ART. I.—Causes which Imperil the Health of the American Girl, and the Necessity of Female Hygiene.*

By GEO. J. ENGELMANN, A. M. M. D., of St. Louis, Mo.

PRESIDENT SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION; PRESIDENT ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY; PROFESSOR DISEASES OF WOMEN, MISSOURI MEDICAL COLLEGE, AND POST GRADUATE SCHOOL; FELLOW OF THE AMERICAN GYNÆCOLOGICAL SOCIETY, OF THE BRITISH GYNÆCOLOGICAL SOCIETY, OF THE LONDON OBSTERICAL SOCIETY, ETC., ETC

To guide woman in greater safety through the dangers which beset her path in life, is one of the highest and most sacred duties of our profession; as we may say that the care of woman is the care of the nation, the good health—mental, moral, and physical—of the woman and mother is the very foundation of our national growth and prosperity. And the conditions which tend to undermine that health cover a field of such extent and importance that you will readily realize the necessity of a limitation of my remarks.

Girl.—I shall speak to you of the girl, the coming mother, of adolescence, the most important and interesting period of woman's life; the period of greatest functional activity,

*President's Address before Southern Surgical and Gynæcological Association, Atlanta, Ga., Nov. 11th, 1890.

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during which the foundation for future health is laid. It is the most dangerous period, during which the organism, the budding mind, the developing system, are more susceptible to disturbing influences from without and within.

It is the time when the clay is soft and the vessel is forming, when it yields most readily, and trifling impressions are permanently recorded.

It is in this period of school, the period of beginning social life, the period of learning in trades, that the nervous energies of the female are most fully engaged, and her activity is concentrated on the brain function, to the detriment of other functions, above all, the developing sexual function, the central and most important, and at that time most readily disturbed.

That I speak of the American girl is but natural, and I need hardly say that she is, moreover, subjected to a far greater number of disturbing influences than her sister in other lands more recklessly exposed to the very injuries which re-act most violently upon the female function.

True as it generally is that woman is the exponent of a nation, indicative of its development, of its growth, of depreciation, the American woman is more closely linked with the state and fate of her nation than the women of other countries.

She shares the febrile activity of our existence; she is the factor in our social and political economy; she participates in the rush and crush of the times to the utmost extent of her nerve force and brain power; but especially is this true of the American girl, as compared with the girls of other countries.

American Girl.—When I speak of the American girl I speak not of the extremes, not of the rich or the poor, but of the girl of the great middle class of our cities—the typical American girl. Compare her to her hearty, strong-boned English sister; the French girl raised within Convent walls, carefully guarded, removed from life until her marriage; or to the average German girl, reared amid the calmness of

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her surroundings, taught the solid rudiments of learning, and educated in household duties.

Compare her even to her sister of the village or country, if she still be free from contaminating influences—from the nerve life of city or boarding school.

You will recognize her at once. You will recognize the effect of brain-work and nerve-strain, the rush and mental activity of the day, the want of muscular training, the want of harmony in life, in training and education, mental, moral and physical.

Whilst I will not agree with Ploss in his characteristics of the American girl, when he records the statement of an ungallant Yankee, that the American girl has no bones, no muscle, no vitality—only nerves; and what should we expect, he asked, when in the place of bread they eat chalk, in the place of wine they drink ice-water, wear tight corsets and thin shoes.

Even now one of our greatest authorities, and one of our keenest observers, Dr. S. Weir Mitchell, says that the American woman is unfit for her duties as a woman—not quite up to what nature asks of her as a wife and mother.

I believe that the essential causative factor to which the ill-health of the American girl must be referred, is functional neglect or ignoring of her functions, and over brain work, over exertions of the nerves and emotions, with imperfect development of the muscular system—an inharmonious development and exertion, physical, mental and moral.

The peculiar organization of woman is too much ignored, and it is claimed that woman is equal to man in her primitive state, and that her functions are physiologically and naturally not in want of any particular attention. Is this function of such paramount importance, and does it so completely control woman's life? This is a physiological problem upon the solution of which depends the relative capacity of woman for labor, mental and physical, and an understanding of the causes of the diseases, their influence and their remedies.

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The answer is readily found, if we observe with an unprejudiced eye the existing conditions.

Importance of the sexual function.—Throughout all the great kingdoms of nature, the importance of the reproductive funtion in the female is demonstrated; it is strikingly demonstrated in the vegetable as well as in the animal life; it was recognized by the intuitive keenness of the most primitive people, and distinct expression is given to those fundamental facts in nature, by the great law givers of the ancient times.

Plants.—Differences in sex are, more or less, well marked throughout the vegetable kingdom, and the supremacy of the reproductive function in the female, with the necessity of additional vitality for its perfect performance, is distinctly characterized.

This is well exemplified in our common hemp, which develops over fifty per cent. of male plants, when the seed is fairly distributed over fertile soil, as a superabundance must be provided for the necessary waste which follows the distribution of the male pollen by the winds. If the seed are thickly sown, so that the nutrition is insufficient or scant, the number of female plants will be diminished as the supply requisite for their greater vitality is wanting; and if densely crowded, the female plant may be altogether unable to develop. To the fruit grower the great demand of vitality for the reproductive function, is well known. The apple-tree with a luscious growth and foliage bears no fruit, its vitality all being directed towards the one function of vegetable growth. To reduce this, the tree is girdled, when with, diminution of growth and foliage, it again fruits.

So, harmonious development of the function is as necessary for the symmetrical growth of the plant, as it is to the perfect development of the human being.

Custom of Races—Ancients.—The high importance of the peculiar function of women, which it is a tendency of our enlightened nineteenth century to undervalue and ignore, was fully appreciated by the people of olden times, and the

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necessity of functional hygiene for the welfare of the community, was recognized to such an extent that it was made obligatory by laws of custom or religion; and the highest penalties—expulsion from the community, everlasting damnation, and even death—were imposed for certain transgressions which are thonghtlessly practiced to-day by the refined and enlightened beings of our advanced civilization.

The essence of such laws and customs of the savages of to-day—in fact of all primitive people from past to present, was rest, functional rest.

Instinct and experience have taught primitive people these truths, which in our day are but imperfectly realized even by medical science, and denied by some who call the susceptibility of the woman of to-day and her ailments, unnatural, and claim them to be altogether the result of civilization.

They claim that woman in her natural state is the physical equal of man, and constantly point to the primitive woman, female of savage people, as an example of this supposed axiom.

Do they know how well the same savage is aware of the weakness of woman and her susceptibilities at certain periods of her life? And with what care he protects her from harm at these periods, so that health may be retained? The aid of religious superstition and the anger of the gods was invoked to secure this simple but effective female hygiene, to secure the much needed rest. Rest by isolation during the periods of functional activity, up to nine days each month, up to thirty and ninety after child-birth, and up to five months at puberty.

Puberty.—The budding of the maid into womanhood is marked by a long period of rest and isolation, and her return to her tribe is celebrated by ceremonies of various kinds.

The importance of surrounding woman with certain precautions during the height of these great functional waves of her existence was appreciated by all people living in an approximately natural state, by all races at all times,

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and among their comparatively few religious customs, this one affording rest to women, was one of those most persistently adhered to.

This idea has been so deeply impressed that a mere touch is looked upon as contamination, and she is accordingly obliged to desist from all the ordinary duties of life, and removed from its exertions and excitements by forced isolation. Where isolation is not customary, as we find it among people approaching civilization, a certain characteristic mark or signal is worn—for the wearer a passport of safety. In East India young girls show their condition by a small piece of linen steeped in blood, which is worn at the neck, as I have myself seen in the Nautch girls brought to this country for the purpose of exhibition; and the Woloff negress wears a bright colored folded cloth upon the cheek.

In the same manner the necessary rest is accorded woman for the period of susceptibility from three to four and even five more days each month throughout functional life.

We either find that a hut is erected at some distance from the village, as among the Bedas, in Cambodia and on the Isle of Yap, one of the West Caroline islands, or that a certain house is assigned for the purpose, as a place of seclusion within the village; so in New Caledonia, upon the coast of Guinea, among the Caffiers, the Hottentots and the American Indians; the Hindoos, the Nayers of Malabar and others, assign to the woman, in families favorably situated, a separate room in the house.

In Japan likewise, she is confined in a separate room, not permitted to eat with the family, and forbidden even the visiting of the Temple—admitting no possible excuse for leaving the house.

Work of every kind, and the bath are strictly forbidden. The dangers of cold water at this time being thoroughly appreciated by all these people, whilst it is a necessary part of their religious teachings, that before returning to the village and their families, after the wave has passed, a bath is

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taken. The laws of Moses and Zoroaster are almost identical, pointing to these great functional waves of woman's life as a working of the Gods.

The laws of Zoroaster necessitated a seclusion of four nights for women, and, what is remarkable, she was then forced to determine her condition by examination, and if the flow had not completely ceased, indicating an abnormity, additional precautions were observed; she must remain five more nights, to which nine days were added, after which time she might cleanse herself and return to life.

Import of Functional Menses.—The life of woman does not run smoothly like that of man. It is characterized by marked periodicity, by ebbs and floods, by great life-waves, which are dominant in the sphere of her especial functions; waves of vascular tension and nerve excitement, marked by a heightened activity and susceptibility of her entire being, distinctly indicating that woman's periodical activity is not a local process, as we have been taught, but one involving the entire female organization, as it was held to be by the ancients, and exerting a permanent influence upon that organism, of whose condition and development it is indicative. This function of woman involves the entire vascular and nervous system, and may be said to be the central exchange of that great net-work of wires, the vaso-motor nerves, the great sympathetic, linking it most intimately with the brain and spinal cord—so with every part of the system.

Wave.—The most persistent period of nerve and vascular excitement is that of developing womanhood, when, for months, the system is in a period of unusual activity, and, consequently, the highest susceptibility, which does not cease as speedily as we see its outward tokens disappear. Then follow the cyclical changes of mature activity, varied by the higher waves of active reproduction.

The functional wave slowly rises until it reaches flood height, with an increase of nerve activity and vascular tension, accompanied by a rise of temperature, as Mary Put-

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nam Jacobi tells us, of from 0.1° to 0.8° F., and it is during the decline of this wave that the depletion takes place, when the distended vessels rupture and nature relieves herself, the temperature steadily sinking, but not reaching the normal until after the cessation of all external symptoms.

Are we to believe that a function which so deeply implicates the entire system can be so completely disregarded? That it does not demand special care—greater care than functions less general, less susceptible, less intimately connected with the organism?

Are we to believe that this function can be ignored? Are we to be guided by the dangerous arguments of those who claim that precautions are unnecessary at this period?

Is Woman Equal to Man?—In considering the initial causes of diseases in their effect upon woman, we must analyze, not alone this one function, but we must consider the entire being of woman, that we may apply the proper standard, and that we may not measure her capacity for labor, mental or physical, or her powers of endurance, with those of man. Woman—the woman of our civilization—cannot be properly compared with man; she is differently organized—differences of many kinds exist—the most obvious, of course, external and anatomical. Form and shape differ; her organism is a different one; individual organs are said to be more vascular and more nervy; she is more emotional, more readily exhausted, less able to bear continuous and prolonged application; more blood is produced, the circulation is more active—so also the respiration. The period of puberty is shorter and more marked, and the last stages of development are reached at an earlier period in life

Consider her lighter frame, her nervous organization, her emotional nature; consider the constant activity of the reproductive functions; the influence of this sphere, which dominates her entire being; the intimate connection of every organ; above all, the spinal cord, with this reproductive centre; and then, need we wonder that injury befalls this sensitive organization when exposed to the intense and

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continuous nerve and muscle-strain of our present system of education and labor, upon a basis of male vigor?

State of Health.—Whilst the evil is great, I am happy to say that an improvement in the physique of the American girl of the better classes, has become distinctly evident of late years, due to progress of the science of hygiene and its better understanding by the educated public, and, perhaps, to the introduction of sound physiological and hygienic doctrines in some of the more advanced schools; but, above all, to the new fad—to the increased popularity of outdoor sports.

In the higher classes, we mark this change; and we may thank a benign Providence for the change of fashion which has produced this result. The girl must have a good color, healthy figure, a brisk walk, to be in the swim; riding and walking, lawn tennis and rowing, even fencing, have become fashionable, and are working wonders upon the health of the American girl who can afford these luxuries—the same girl who, twenty years ago, drank vinegar to acquire a fashionable pallor and an early grave.

Compare the swinging gait of the girl of to-day with the mincing walk and the "Grecian bend" of some years ago.

A beginning has been made, but the greatest difficulties are still to be overcome. The American girl has a just claim to the most perfect and harmonious development—mental, moral, and physical—by virtue of the invigorating influence of an intermingling of race and blood, the favorable hygienic possibilities of her life, and the freedom she is given. But the average girl is not what she might be, and I repeat that this is due to our habits of life and our methods of labor and education.

Education.—We must, of necessity, inquire whether the health of the girl does suffer during school-life; or, rather, Is functional life impaired by our present methods of education? And I must unhesitatingly say that it is, unfortunately, a question which is asked in different ways, and distorted by the partisans of higher education for women.

Statistics of functional health during school-life are out

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of the question, and we must refer to a few general facts, and to our individual observation.

How commonly do we see the once healthy girl returning from school—above all, the pernicious boarding-school—neurasthenic, with flushed face, cold feet, impaired digestion, backache, painful and disordered functions—all of which symptoms gradually fade with the enjoyment and recreation of vacation, to return with the next session of school!

It is the American idea of putting one through, which lays the foundation of evils which not only follow the individual through life, but pursue her in her descendants. It is the idea of finishing her education—a given job to be completed before the pleasures of society can be anticipated, almost invariably fatal for the bright, gifted girl in her last year at school. It is the source of beginning functional disturbances. She is straining every nerve for the dangerous struggle of supremacy, and, cost what it may, her ambition must be gratified; she must graduate with honor before making her debut in society; and even now, her emotional nature is stimulated and excited by the foretaste of its pleasures. Evenings which should be devoted to rest are given to boy visitors and dancing parties. Healthy recreation, out-door exercise, and the necessary sleep, are neglected; school gymnastics, calisthenics, or official recreations, do not afford the healthful exercise needed. An increased quantity of blood is diverted to the brain, whilst the general supply is diminished and the circulation impaired; lassitude, malaise, and local trouble follow. Is it to be wondered at that she breaks down—that the mothers best fitted to produce capable children fail to fulfill their destiny?

In boarding-schools, enervating routine takes the place of social dissipation, but the results are the same, if not worse, as the girl is removed from her natural guardian and adviser—the mother. One statement from the pen of Dr. Goodell will best indicate the frequency of the injury. He tells us that he has been repeatedly asked by physicians attending such institutions whether it were possible that laun-

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dresses could have drugged the scholars unbeknown to them. in order to avoid the washing of soiled napkins—so common is the complete cessation of that essential function, in the most critical period in the girl's life, removed from home influence, with a view of securing the supposed better advantages.

This is the state of affairs in common schools and boarding-schools, at the most critical epoch, from twelve to eighteen. Now, let us see what the results of so-called higher education are: The showing is a better one, as we may see from the report of the Association of College Alumni, who have investigated the present health of female college alumnæ as far as practicable.

The health of these girls was very much the same as that of their parents, but three per cent. better; constitutional weakness being mostly the cause of such disorders as did exist. Over-work, accidents, and bad sanitary conditions would explain others. Among the college graduates, the deterioration in health is two and one-half per cent. less than in the working girls of Boston at the same time.

Worry over studies alone caused no decline in health, whilst worry over personal affairs caused decline of health in ten per cent.; and worry over studies and personal affairs combined, in fifteen per cent.; but the health of those who declined in college has more than recovered in later years.

We find but a very slight falling off, and that only from excellent to fair health, in college life, as we might expect if we consider that it is only the healthier and stronger girls who venture upon higher education, and that one-half of these avoided exertion during the menstrual period, and saw but little society.

We must bear in mind that college education is an innovation of recent date, in the establishment of which modern hygiene has been consulted, and study and recreation, as well as the health of the pupil, is subject to constant medical supervision. Moreover, in some of the more advanced institutions, good health is made a condition of admission; and yet Miss Howe, of the College Alumni Com-

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mittee, finds that only four hundred and ninety-six out of one thousand graduates married between the ages of fifteen and sixty, and she comes to the conclusion that the tendency of higher education for women is to celibacy. If this is by choice or necessity—for reasons moral or physical—she does not say; it appears to be the natural result of misdirected culture.

The injurious effects of our present female education upon the essential function of woman must be apparent, if we bear in mind the period of life from twelve to eighteen, and eighteen to twenty-one, when nutrition should be directed to the essential organs of female life, whilst all other organs are in active growth, likewise demanding increased supply. It is then that an increased expenditure of vital energy is demanded, and the brain concentrates upon itself the nutrient fluid; it is at this time, when the system is most susceptible to disturbing influences of all kinds, and in an almost explosive state during one week each month, that it is subjected to the greatest strain, to over-brain work, nervous and emotional excitement, and even physical injuries.

Are the results not natural, when we consider that girls, in this dangerous period of life, spend more time in study than boys, and that boys do have healthy recreation? The Greeks even withheld male children from study until the tenth year, while laying a solid foundation for a healthy physical system and a harmonious development of the functions.

Labor.—Injuries are wrought by our systems of education, and very similar are the injurious effects of our system of labor upon the developing girl and the reproductive functions; but less occult and more marked than those of education, for the reason that the unfortunate sufferer cannot withdraw like the school-girl at will, or when the evidences of injury are distinctly felt. She is obliged to continue until she is prostrated.

It is not manual labor only; it is not alone wear and tear on muscle which tells—nerve-wear is still worse. It is the

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girl in the employments now so much affected, as a so-called higher class of female labor, in telephone and telegraph offices—the clerk, the type-setter, and the stenographer. Examples of this kind we unfortunately see every day.

A most interesting report is given by the Bureau of Labor Statistics of 1875, on the special effect of certain forms of employment on female health, from which I shall quote, as it is the first, perhaps, which has regarded the cardinal relation which labor bears to essential attributes of the forming woman, on which hinge all other vital results.

The alarm-bell, the first evidence of coming trouble, is menstrual disturbance; and how rapidly nerve-strain reacts upon the functions, we may see by the example of unexpected rush of business suddenly befalling an operator, in good health, during the period of functional activity; the complete cessation of the flow, the general prostration which follow, with slow and imperfect recovery.

In the main, these functional disturbances are produced by over-work, with innutritious and non-sanitary associations, and labor of both body and mind, and the effects of disease primarily produced by early employment during animal growth; the regular and long-continued employ of the plastic, undeveloped girl, and the long day's work with unremitting attention. As causative errors in the management of labor are mentioned in this most admirable work, we report the following:

1. A.—Youth unequal to the work.
   B.—Impairment of animal growth.
   C.—A constrained position.
2. A.—A disregard of ultimate injuries.
   B.—Unbroken application without vacation for a long term.
   C.—Depression and disease inviting demands on immature vitality.
3. Employ in unsuitable occupation for condition of body and mind.
4. A.—Unduly long hours.

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B.—Concentration of vital energies, involving extreme nerve tension.

C.—Unfavorable sanitary surroundings.

Knowledge of Function.—Constant injury is wrought by the error of system in school-room and work shop, but potent and more directly evident causes of ill health and functional disturbance in the growing girl exist in our daily life, our social customs, and our habits of dress. To them I will not refer; they are too well known.

The constriction and compression of the corset, the dragging pounds of the skirt, the circulation-impeding garter, the insufficiencies of low-necked dresses, of thin stockings and shoes, and the total absence of protection where it is most needed—the absence of drawers.

Among our social customs there are many which bring her ruin. I cannot even touch upon all of them; there is but one of which I shall speak, and that is the most dangerous of all, more or less underlying all other causes of disease—it is the ignoring of the function of woman by woman, by the mother, and her ignorance of its import.

Fearful are the consequences of woman's ignorance, the calamities which follow the course of the misguided mother; swift, certain, and lasting the penalties inflicted upon the unadvised or ill-advised girl, whose one great misfortune is ignorance. She steps into the unknown sphere of womanhood, and in darkness she pursues its irregular path. Fortunate is she who may by chance not stumble.

Many who might be saved by proper management during the transition from adolescense to maturity now fall victims to their ignorance, and no words of mine could be more convincing than the data given by Tilt as far back as 1853, in his admirable work on the elements of health and the principle of female hygiene, which shows how many are injured by the unexpected appearance of the unknown function.

Great is the danger in all classes, be it from ignorance or modesty, and most susceptible is the more highly-strung nervous system of the more refined organization. Even though

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the bark float in safety through that first stormy epoch of life, it is constantly endangered, most of all from the ceaseless crash of the ever-recurring waves of functional activity; and it remains in need of guidance until it has passed through a final storm into calmer waters. The mother is the pilot, and functional hygiene the guiding chart; the physician the engineer who maps it out

I cannot exaggerate the danger to the delicate bark, to the health of the susceptible girl, from each wave of functional activity. Its greater danger is during the height of the wave—that period of greatest activity throughout the entire system, the period of vascular pressure and nerve excitement, which threaten her functions as well as the era marked by local depletion and depression, the decline of the wave.

So common are the injuries to female health at this epoch, that I need but state a few of the examples which have come under my observation during the writing of this paper—in fact, I may say almost upon this very day—to astound you. Fright, nervous and emotional excitement, exposure to cold, have brought injury to so many at this time. What more natural than that the anxious girl should seek to check the bleeding wound, as she supposes.

For this purpose the use of cold washes and applications is common; some even seek to stop the flow by a cold bath, as was done by a now careful mother who lay long at the point of death from the result of such indiscretion, and but slowly, by years of care, regained her health. The terrible warning has not been lost, and, mindful of her own experience, she has taught her children a lesson which but few are fortunate enough to learn.

How many more who have passed in safety through the first ordeal, are ruined by an indiscretion or an exposure at a later period! Many a vigorous frame has been broken, health has been ruined, and death even caused by disturbance of the function, during its period of activity, by exposure, by cold, by physical or mental exertion, by nerve or emotional excitement. A cold foot-bath during the period,

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a dance in low-neck dress, a walk in rain or snow, a hard day's work of mind or muscle, an excitement of heart or head has made an invalid of many a previously healthy girl, by its influence on this omnipotent function.

Conclusion.—I have endeavored to show that the health of the American girl is threatened and impaired by causes more or less avoidable, as they are due to our methods of life, our methods of training and education; that the physique of this girl, most favorably situated, amid auspicious possibilities, is imperfect, her brain overworked, her nerve power exhausted, her function impaired, and reproduction endangered—all by reason of the susceptibility of her peculiar organization, and the increased impressionability of the sensitive system during the years of development, in which it is subjected to the most severe strain.

Such is the fact; what is the remedy? Condition and cause make the remedy self-evident.

Let me briefly review the conditions as we have found them: A perfectly-organized being, in the very beginning of woman's existence, waning upon the rise of the great wave of functional life, during the period of functional development, in labor and education indicative of nerve and physical prostration; with impaired circulation and digestion, imperfect menstruation, and diminished reproductive power; neurasthenia and functional disturbances constantly intermingled as cause and effect; unfortunate results brought about, in the main, by more or less the same influences: 1, Over brain work and nerve strain, with neglect of the physical system in education; 2, nerve strain and partial or incomplete muscular activity in labor—both influences which are inseparably connected with, and complicated by, causes more active and independently potent; 3, the ignoring and neglecting of functional hygiene; 4, physical and emotional strain of society, improprieties of dress, and over-stimulation of the senses.

The remedy is, attention to woman's peculiar organization and the cyclical waves of her dominant function; or, in other words, harmonious development and occupation

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of nerve and muscle; diminished brain work and nerve stimulation, with increased and co-ordinate physical exercise; increased protection and diminished compression of dress; self-knowledge and individual care during periods of heightened susceptibility.

Changes are necessary in custom and fashion, in methods of labor and education.

Whilst each individual and each calling is a law unto itself, I may say in a general way that we should endeavor to obtain the end of education in its widest sense, the development of all functions and faculties, to render the girl fit for the life she is to enter, in every way; "to render youth beautiful, healthful, strong, and honest."

A harmonious co-education of mind and body should be approximated, with coincident maintenance of proper hygienic conditions. The nerve and emotional strain of class competition must be abolished; the stress of constant work, the train of thought, and the routine of regulation must be broken; mind and heart should be educated rather than memory, the nerve strain varied by healthful pleasures and physical exercise in the open air, and relieved more or less, according to individual necessities, during periods of heightened susceptibility.

Whilst the initial causes of ill health in the school-girl may readily be overcome, the dangers which beset the laboring girl, though equally evident, are more difficult of removal. The same necessity exists for individual care upon the height of the functional wave and during its period of decline; the same necessity for a proper co-ordination of labor, physical and mental; the same danger from constant application, from the strain of one part, one function or organ to the exclusion of others; nerve tension is even more continuous and intense, and muscular exertion is limited to individual muscles.

The years of development should be respected and the continuity of labor; broken rest and change afforded frequently for short periods. Much good might be done by the necessary changes in customs and fashions; by suitable

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dress, and last, but not least, by self-knowledge; and I will close with a plea for the self-care of the girl and her proper physiological instruction by the mother which, alone, will mitigate or remove the initial cause of many of her ailments. Upon the mother I wish to impress that the perfect development of the female function, and the maintenance of this function, once developed, in a healthy condition, is essential to the perfect development of the girl and the perfect health of the woman; that self-care, a well-regulated female hygiene, is the foundation of her well-being, and that it is the mother's first duty to so guard herself and so guard her daughter.

Art. II.—Silicate of Soda—Some New Methods of Use in Surgery.*

By G. A. BAXTER, A. M., M. D., of Chattanooga, Tenn.

Professor Surgery Chattanooga Medical College; President Tennessee State Medical Society.

Before presenting to you the jacket, which is the real subject of this paper, permit me to make a few remarks upon the use of silicate of soda in general.

It seems to me that this material furnishes an apt illustration, in our art, of the pendulum swinging too far backward in the presence of new discoveries. Its almost complete abandonment, of late years, for plaster of Paris, has sacrificed much that was useful, as well as ornamental, in surgery; in other words, the silicate possesses so many qualities, in certain cases, superior to plaster, and as a substitute for metal or board splints, that it is well to recall attention to them at the present time, in a presentation of the comparative claims of these two materials to our favor.

I deny nothing as to the usefulness of plaster; the blessings from its use have been manifold and almost universal; so that I regard it as a carpenter does his commonest tools—

* Read before the Southern Surgical and Gynæcological Society at Atlanta, November 13th, 1890.

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with a certain constant and lasting reliance. But that it has not proved entirely satisfactory in all cases, is a proposition that cannot be gainsaid. Its two qualities of hardness and quick drying have enabled us to look with a great deal of leniency upon its great weight, its want of flexibility, its proneness to rub off, to crack and to break, the difficulty had in cutting it, with the almost impossibility of readapting it; and, finally, the serious matter of always obtaining good plaster, so easily is it affected by changes in the atmosphere, and, in consequence, the danger of failure, however skillfully applied, with the added fact always in mind, that it is never suited to else than a permanent dressing, and consequently cannot be put on until swelling has subsided, are qualities which unquestionably unfit it for any uses to which it might otherwise be excellently adapted, and, when used, tax greatly the skill and patience of the surgeon.

There are surgeons so skilled in its use, who, by their skill, have been enabled to reduce these qualities to a minimum of disadvantages themselves, but they are unquestionably ever present to the general practitioner, and afford him great annoyance and worry.

The Bavarian splint, in certain cases, overcame, to some extent, some of these disadvantages—not all; the soaked-felt splint some more of them. But the Bavarian splint could not remove the unnecessary and inconvenient weight, though it did allow of an easier inspection of the fracture during the process of treatment. The soaked-felt splint, while good in many ways, and superior both to the Bavarian and the plain roller-plaster-splint, had the added advantage of necessitating a stock on hand, or a separate pattern cut for each fracture.

The skillful surgeon so often found these defects apparent that he still persisted in a search for new material, and metal splints, perforated and otherwise, presented. That these are useful, I again do not seek to deny; but more often than otherwise, when his chest of splints is consulted, the very one he wants for immediate use is gone, and

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he is forced back upon first principles, to board splints, as temporary, if not permanent dressings.

While I claim it to be good surgery to adopt any means at hand to keep the fractured ends of bone in apposition, and that surgeons should have ingenuity enough to do so, and would commend the skill of the backwoods practitioner, whom I once knew to treat a case of gonorrhœa with a syringe made from a piece of cane, with a goose-quill for a point—he was only to be commended because it was the best thing to be had by him—yet we are called upon now to select those things within our power which will not alone accomplish the purpose, but do so with the least inconvenience and discomfort to the patient.

Perhaps there is no field where the benefits of plaster have been more acutely felt than in certain spinal diseases and injuries. The benefits from the use of the plaster jacket in such cases have been so great that we have accustomed ourselves to disregard the discomfort, to speak within bounds, considered in connection with its mastery over progressive deformity, or excruciating agony, and the rest to the disease and the sufferer they accomplished.

Nor is the weight the only disadvantage; they rub off and break down; nor can they be ventilated; and being absolutely immobile, are consequently incapable of readjustment; and a new suspension and a new change is necessitated by a change in weight of a few pounds, frequently the immediate result of the freedom from pain, and rest, the first application of any jacket brings the patient.

These are defects we would gladly remedy, and remedy has been attempted by instrument-makers and others, but with so much added cost as practically to nullify, in a great measure, the usefulness of the measures designed. The leather perforated jacket is good; is lighter than the plaster, and does not break down or rub off; and is ventilated by perforation; but it is costly, and is not subject to readaptation, and transfers, in a measure, to the instrument-maker a case that properly belongs to the doctor. The same may

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be said of the woven-wire jacket, and all others of this nature, inclusive of the watch-spring and cotton jacket.

The lightest plaster jacket I have known constructed for an adult weighed three and a half pounds. A lighter one than this loses the advantage of support, and is easily broken down.

The jacket of baked silicate of soda, which I bring to your attention to-day, possesses all the qualities to be found in the plaster—firmness and support—and weighs actually one pound six ounces. It is neater in appearance and finish—can be perforated like leather for ventilation, while plaster cannot. It is even lighter than leather, without its costly process of construction, and has the same advantage over the woven-wire jacket, with the additional advantage over both these latter and all others of this class, that it can be constructed by any surgeon at any time, or in any place, by the directions that I shall proceed to give you.

Before proceeding further, let me say that the one great fault of the silicate is its slow drying qualities; it generally takes at least twelve—often twenty-four hours to harden *in the ordinary way.* It was this quality that brought it into disrepute, and made the quick-drying plaster a popular favorite, with all its disadvantages, without an attempt to overcome this one disadvantage in the silicate. As far as I know, I am the first to use it in this way. It was rightly supposed that no patient could be suspended until it hardened, and that it would accomplish no good unless the patient was in a state of extension and counter-extension.

Recognizing these as facts, I sought to accomplish these results in a different way, and, if possible, utilize the advantages of both, for the benefit of my patient.

I suspended my patient and put roughly a plaster jacket around her (it makes no difference how rough it is, as it is only temporary), and cut this as soon as it had hardened enough to retain its shape, thereby lessening materially the time of the suspension—the most trying ordeal with this or the plaster, and not without its dangers when long con-

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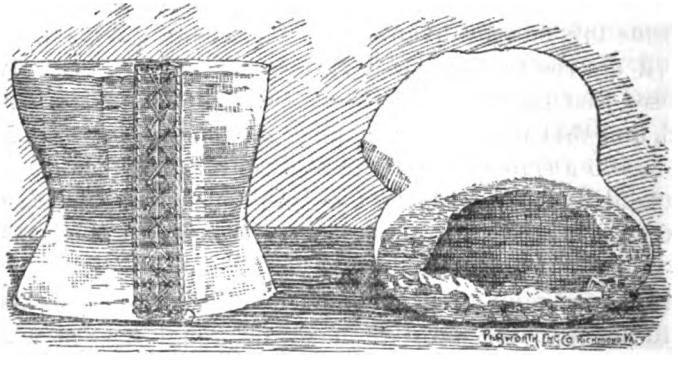
tinued. I bound the cut edges together, where it had been cut down directly in front, with cords, and then placed a core of paper in the centre. This paper core was used for two reasons—first, to lighten the cast and take as little plaster as possible, and, secondly, to dry it the more readily by heating the inside. This done, plaster was poured around the core and inside the cast, which gave me a mould of the body in extension and counter-extension, exact in every respect. Around this was made the silicate jacket after the manner of the plaster roller bandage, weaving half-inch metal strips in the meshes of the bandage at a distance of five inches apart around the whole cast, an inside-lining of a knit shirt having been first placed over the cast The whole was then placed over a coal-oil stove (an open hole in a stove would have done as well) and allowed to dry out, which it does in from half an hour to two hours, or less, especially if the cast has been previously dried. This process of heating not only dries the silicate, but bakes it as well, and renders it impervious to the action of water or the perspiration, and gives it sufficient strength to allow of it being perforated for ventilation. It is now cut from the mould with a straight incision down the centre, two pieces of leather, to which button-hooks or eyelets have



been previously attached, sewed up and down the front on each side, when the whole can be laced up solid or loosened and taken off at will. The necessity of taking off a jacket

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or leaving it on during the whole course of treatment, will of course depend upon the character of the disease or injury under treatment.

A detailed description of this sounds formidable, but in reality the process is a very simple one, and takes little time actually consumed and conparatively little skill, with results so entirely satisfactory to oneself and the patient that the surgeon will be amply repaid. Not alone is this all. Once your cast is made, by scraping the cast, pressure can be put at any point, graduated as desired to suit the case, or as many casts as desired can be made from it exactly alike for cleanliness or change. The cast can be padded over the hips and stomach, and thereby save the necessity of pads on the jacket itself.

There are other general uses in surgery, as fractures, where I have found the silicate useful and extremely handy, though these are methods of old practice and only need recalling. For sprains, we recognize the fact as a general broad statement that the remedy is rest, and with rest is included the non-occurrence of new irritation until inflammatory action has subsided. Two or three turns of a silicate bandage does this to perfection. It matters little here whether it dries soon or not. It will give ample support to the joint, and may be put on before the swelling occurs, during the time it exists, or as it subsides, for it can be cut as easily as pasteboard, and opened or closed as occasion demands, and has even enough flexibility to be removed entirely from the knee or ankle like a gaiter or shoe. It can be made sufficiently strong, and yet thin enough to be worn on the foot and ankle inside a shoe only a number or so larger than ordinary. When a certainty exists that it will have to be cut, as when it is put on at the height of swelling, it is well to weave between the folds of bandage pieces of cord or tapes, letting them project outside in front, on each side the median line of foot at about the distance of two inches apart, so that they may act as binding strings when the cutting is done.

As to fractures in general, the silicate is useful, but by

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no means unobjectionable as a splint; there we have to encounter the greatest objection to it in its most objectionable form. Absolute immobility should be maintained from the very start; no time should be wasted on such slow process of drying as silicate possesses, and if used at all, the fractured limb must either be fixed immovably in a fracture-box during the drying period, or strengthened and held in place by temporary supports until the silicate is hardened, when they may be removed, leaving a model splint for lightness, hardness, durability, and appearance behind. In the arm, for example, as in Colles' fracture or a fracture of one or both of the fore-arms, the silicate roller is put on with the arm in extension and held by an assistant, a dividing roll of cotton having first been placed on the naked arm to separate the bones. The roller completed, side splints of thin board are used until dry; it then remains flattened fore and back, giving perfect immobility, with no tendency to push the ends from the periphery toward the centre. It can be incised, like the others spoken of, for the purpose of examination of fracture at any time. In place of the short splints in Buck's dressing for fractured thigh, especially in conjunction with Volkman's extension foot-rest, it acts admirably, better than anything else in my hands, for it can be put on at any time, and kept in accurate adjustment as the swelling subsides by cutting and binding with thin leather straps, fitted with buckles around the splint, the silicate being so thin and yet so firm that the overlapping makes no difference with the result in fractures of the thigh.

We have the utmost confidence in the purity of McArthur's Syrup of the Hypophosphites of Lime and Soda. See their interesting advertisement on white card-board, facing advertisement page 51.

I find Ponca Compound to act very nicely in inflammation of the cervix uteri and irritation of the ovaries.

E. Brinkerhoff, M. D., Bristolville, Ohio.

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Art. III.—Fistula in Ano. A Clinical Lecture.*

By E. E. MONTGOMERY, M. D., of Philadelphia, Pa.,

Professor of Gynecology, Medico-Chirurgical College; Obstetrician to the Philadelphia Hospital; Ex-President American Association of Obstetricians and Gynecologists, Etc.

Gentlemen,—The patient I bring before you to-day is a woman forty-four years of age, suffering from some perineal trouble. She has complained of a periodical discharge from the rectum and vagina, attended by severe distress and pain. This condition has been quite obscure, and her physician, Dr. Silver, of Windsor, N. J., to whose courtesy we are indebted for the privilege of seeing her, has been uncertain as to its character.

In examining the patient, I noticed some induration in the perineum, which led me to make a closer investigation. And let me again emphasize here the importance of a careful physical investigation of the external genitalia, as well as of the internal organs, when the patient presents herself suffering from some diseased condition. In separating the vulvar orifices, I noticed a tit-like projection upon the right labia, just a little external to the commissure; slight pressure caused a few drops of pus to exude, which clearly demonstrated that we had here the opening of a sinus. This sinus may communicate simply with an abscess cavity formed in the labium by the inflammation of one of the glands of Bartholin, or by abscesses communicating with the rectum. Passing a probe into this tract, it was found to pass backward toward the anus, and by introducing the finger into the rectum, an internal opening was found between the external and internal anal sphincters, which demonstrated the fact that we had to deal with a fistula in ano.

Fistulæ in this region are of three kinds—first, those in which the fistula has two openings; second, those in which it has an external but no internal opening, and are known as blind fistulæ; and, third, those having an internal opening but no external, which are known as internal blind fistulæ. All these fistulæ arise from inflammatory conditions about the anus, resulting in the formation of abscesses. The cause may be due to a suppurating internal or

*Delivered in Medico Chirurgical College, October 21st, 1890.

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external hæmorrhoid; from injury to the mucous membrane; from marked constipation; from the passage over the surface of fecal material, in which bone or other irritating material is imbedded; and to traumatisms, such as blows, kicks, or falls. The danger of the formation of a fistula renders it very important that the presence of pus in this region should be early determined and thoroughly evacuated. The evacuation of a pus cavity, however, prior to its rupture, does not necessarily preclude the possibility of the development of a fistula, as distension of the abscess sac may have been so great as to have caused sloughing of the internal wall, and the consequent development of a fistula.

These fistulæ are excessively painful and unpleasant to the patient. The passage into the fistula of flatus or fecal material keeps up the inflammation and prevents its healing. Often, in these cases, in which the fistula has no internal opening, the process of granulation and healing is interrupted by the action of the sphincter muscle. Where the muscle is placed at rest, the fistula will finally heal of itself.

In examination of a patient suffering from a fistula, it is important that the condition of the rectum above should be determined; and it is not unusual that fistulous tracts frequently result from syphilitic ulceration or malignant infiltration of the wall of this viscus; and in the case of malignant disease, you can readily understand that any operation for the cure of the fiscula would be futile. The fistula may take place in any direction from the anus—forward, backward, or laterally; and not unfrequently you may see a number of openings, giving the appearance of some insect having burrowed about in this region. Where an abscess or fistula is poorly drained, we may have pus burrowing in different directions through the abundant connective tissue of this region. The abscess and fistula tracts are most likely to be found running forward, through the perineum, making their opening in the margin of the

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vagina or upon one or the other labia, and sometimes upon both.

In the passage of a probe through a fistulous tract, it should be remembered that this has been an abscess cavity, and that, consequently, the probe may not pass in a continuous line from one end of the fistula to the other. The internal end of the fistulous opening is usually found in the groove between the internal and external sphincters. For this reason, in the examination of cases, the operator frequently passes the probe too high up, and does not discover the internal opening. In many cases, this may be discovered by introducing the finger into the anus and feeling the tit-like projection at its orifice. It should be remembered, too, that it is very easy, in using force with the probe, to push it into the connective tissue, and in this way make a misleading artificial fistula.

These fistulæ are lined with pyogenic membrane, and show a tendency to continue until this membrane is removed.

Different plans of treatment have been instituted for their relief: The use of various irritating injections with a view to the removal of the pus-secreting membrane and the development of granulation. The difficulty, however, is in the fact that the discharge of the rectum, passing into the fistulous opening, keeps up an irritation.

Another procedure is by thorough dilatation of the sphincter muscle to place it at rest, and the introduction through the opening of a rubber tube, partly for drainage, and partly, by its pressure, to produce absorption of the pus-secreting membrane. Much has been claimed for this method of treatment, but in the few cases in which I have tried it, I have not found it especially successful.

The usual method of treatment of fistula is to cut through the fistula from one end to the other, scrape out the tract, pack with antiseptic gauze, and allow it to fill up by granulation.

Where the patient dreads the knife, and prefers a slower method of treatment, a silk or rubber ligature may be in-

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troduced through the tract and tied with considerable firmness, permitting the intervening tissue to be cut through by ulcerative action. Granulations form behind the ligature, so that it is pretty well healed by the time it has cut through.

All these methods are objectionable in the male, for the reason that they decrease the power of the sphincter muscle, and result in the formation of a certain amount of cicatricial tissue, which leads to incomplete control of flatus and liquid contents of the bowel. In the female, you can readily understand by the physical conformation why this must be still more objectionable; for in a fistulous tract, such as the one we now have before us, leading from the anus to the vagina, we would have through the transverse peronei and constrictor vaginæ muscles, a wide separation of the cut surfaces, by which the sphincter action would be subseqnently lost.

To obviate this, the better plan would be to cut through the tract, as we are now doing, passing a groove director through the sinus, and upon this a curved bistoury; then, with a curette, carefully scrape out the diseased tissue lining the tract, and follow up any burrow or secondary fistula that may be present. Having thoroughly removed the diseased tissue, in this way we proceed to introduce sutures, bringing the surfaces again in close proximity. The sutures we will use here will be silk. Catgut sutures may be used for the same purpose, but should be prepared so that they will be retained longer than the ordinary catgut suture. We introduce our sutures first from the rectum, requiring here three sutures, and some four more on the perineal surface, and two from the vagina. Now, carefully irrigating the surface with an acid sublimate solution, the parts are brought together, completely restoring the perineum. These sutures have been so introduced that there is no tissue left unopposed, this favoring the accumulation of blood, and subsequent development of an abscess.

The patient has been thoroughly prepared for this operation by doses of saline, given every alternate day, to bring about the thorough evacuation of the contents of the ali-

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mentary canal; she has been kept upon a liquid diet, consisting of animal broth and bovinine, carefully avoiding the administration of milk. The latter, through the large amount of casein which it contains, produces a great deal of hard fecal material, which may endanger the union of the surfaces.

The sutures will be removed at the end of one week, the patient will be permitted to void her urine upon the bed-pan, and the catheter will not be used unless positively necessary. After the urine has been voided, some warm water or disinfectant solution will be permitted to flow over the vulva from a sponge, in order to dilute the urine that may remain in contact with the surface. After forty-eight hours, a vaginal douche will be used once or twice daily; the patient will be kept quietly in bed, with the limbs tied together as for an ordinary operation upon the perineum. By this plan of procedure the sphincter muscles are brought into contact, the complete control is restored, the fistulous tract is healed up at the end of two weeks, and the patient entirely well; and to me it seems a far preferable plan than that of permitting it to heal up by granulation.

ART. IV.—**Points on the Practical Treatment of Insanity.**

By ELLIOTT T. BRADY, M. D., of Marion, Va.,

ASSISTANT PHYSICIAN TO THE SOUTHWESTERN (VA.) STATE HOSPITAL FOR THE INSANE, ETC., ETC.

In considering the peculiar inquiries we so frequently hear from intelligent men, and even intelligent physicians, in regard to the treatment of the insane, one is led to wonder why so little is known by the general practitioner, and the public, of the management and treatment of the insane in the State institutions. It is safe to say, for statistics prove, that there are few classes of serious disease which can show a greater percentage of recoveries than insanity; and statistics, alas, also show that few troubles have received less consideration from the general practitioner.

More with the idea of acquainting the public, through

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the profession, with latter-day ideas on the subject, than with any intention of presenting aught of originality, the following paper is written; and I will present, as briefly as possible, not new facts, but facts which may be new to some, regarding the rational treatment of the insane.

It is difficult to be both concise and thorough; and if I have sacrificed thoroughness to brevity, the fault, I am sure, will be more readily condoned than had the opposite course been pursued.

Before considering the curability and treatment of insanity, let me beg the profession not to look at the question with the prejudiced eye of the superstitious laity, but, in considering any case of insanity, to give it the same careful scrutiny and analysis which would be accorded any other abnormal state.

Insanity is not the disease, but the symptom of disease; just as in diarrhœa and constipation, for instance, we see but symptoms pointing to certain abnormal states in recognized organs—so, in the "diarrhœa of words," accompanying acute mania, and the lack of thought (ideational constipation), with stuporous melancholia, or with dementia, we should recognize only sign-boards pointing out the path of treatment which will lead to recovery.

And now to the treatment; and here I beg the attention of every reader. More important than any *method* of treatment is the *time* of treatment. The *earlier* a case is treated, the brighter the prospects for recovery. In support of this statement, I present a table showing the results obtained in this institution since its opening. These results are so tabulated as to show the relationship which early treatment bears to the percentage of recoveries:

Duration of Insanity Before Admission.	*Admitted.*	*Recovered.*	*Died.*	*Remaining.*	*Cured.*
Less than 6 months....	167	148	2	17	88 per ct.
6 months to 1 year.....	88	65	5	18	74 per ct.
1 year to 18 months.....	67	43	3	21	64 per ct.
18 months to 2 years.....	155	52	16	87	33 per ct.
2 years to 5 years.....	71	15	18	43	21 per ct.
5 years to 10 years,.....	50	5	9	36	10 per ct.
10 years to 20 years.....	34	2	9	23	5 per ct.
Over 20 years.....	5	0	2	3	0 per ct.
Total.....	637	330	59	231	53 per ct.

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This table was compiled October 1st, 1890, and is authentic; and if I can persuade my professional brethren to carefully analyze it, and bestow upon it earnest thought, I will have done more for the cause of the insane of the State than I could do in years of individual service. These results are slightly above the average, but they are the actual results of this institution, and the same rates have been maintained since that date. If the results of all the hospitals of the State, or even of the United States, were similarly tabulated, the variation from the above figures would be slight.

Hoping to make a more certain impression, I wish again to repeat that the *time* of treatment is of far greater importance than the *method.*

Lest this table should be abused, let me warn against what might, through mistaken zeal, lead to bad results—viz: the sending of patients to a hospital *too* early. Be sure a patient is insane before sending him to the State institutions. If called upon to examine a case on whom a magistrate's commission of inquiry is being held, do not listen to the magistrates, as nine out of every ten of these legal luminaries conscientiously believe to be insane every person who cannot answer promptly and correctly some nonsensical question which his own dull wit has probably spent hours in framing. Nor is it well to hear the testimony of any witness before having privately examined the patient, as it occurs with disgraceful frequency that patients are sent to hospitals for the insane suffering from the delirium of typhoid or meningitis—the agonies of acute arthritic rheumatism—as acute maniacs, or, in the convulsive stage of apoplexy, as epileptics. Self-protection and self-respect both demand greater care in the diagnosis of insanity.

Many physicians will speak of, and dwell upon, the necessity of verifying delusions, and seek to find a basis for the patient's ideas. In cases where one is hurried, it is well to do this; but this is not a necessity to one thoroughly acquainted with what he is about; and it not infrequently occurs that the facts of a case happen to correspond with

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the delusions. As Spitzka says: "He who, after a careful examination of the patient, requires such an examination to find out whether he is insane or not, is simply not an alienist."

What Cases are Curable?—In answering this question, one can only generalize; and thus generalizing, I may say that when a case is treated within two months of the beginning of the attack, we may expect a favorable result in 90 per cent. of acute maniacs; the same in acute melancholiacs; 75 per cent. in chronic and subacute melancholiacs; and 55 per cent. in chronic manias. Then we have the numerous other grades of insanity, variously classified by different authorities. Amongst the most common of these are dipsomania, of which 100 per cent. will be cured temporarily, and about 10 per cent. permanently; paranoia (or monomania), about 25 per cent.; epilepsy, with either melancholia or mania, about 5 per cent. (?); dementia, about 10 per cent., etc. These, remember, are generalizations; although, as such, they so nearly approach facts as to be available for consideration in prognosis. The great variety of phases which we find in each class accounts for this need of generalizing.

In dipsomania, the accompanying circumstances are so varied as to make the prognosis uncertain, as a class, but much more easily given in an individual case. Some cases will have developed rapidly, after a short period of excess. In these, the percentage of cures will be much larger than is above given. Again, others will have followed long periods of debauchery and dissipation, and will have added gravity in the fact of inherited desire. In these, the outlook for permanent cure is almost hopeless; and with this class of cases we might safely say that they will be cured only as long as they are in an asylum; and the beginning of the next attack can be generally relied upon to appear with the first temptation. So in the dementias—some are dependent upon serious organic destruction and of long duration; and of these, few have possibilities of recovery, while in others, the organic degeneration is just beginning, and, in these,

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the outlook is much more favorable. When, in any case, the abnormal mental state has existed for a lengthened period, the prospects for recovery are far less favorable each year, serving to establish a "*habit*" *of abnormal action*, which rapidly destroys all probability of cure.

It is these cases, and those of idiocy, which swell the ranks of the incurable, and accumulate in our hospitals. Idiots and imbeciles are not insane, but are the products of inheritance, and are not included in the class of curables. They have not insane minds, from the fact that they have *no mind at all.* It will be noticed that the percentage of cures in epilepsy is put at a very low limit—namely, 5 per cent. I might go further, and say that when epilepsy has existed for two years that none at all will recover. This is meant to refer to true epilepsy. There are many cases sent to hospitals, with a history of epilepsy, who have not *true* epilepsy, but have merely formed the "convulsive habit," from reflex agencies, such as indigestion, local irritations, etc.; and these cases usually yield readily to treatment, rationally applied.

But enough has been said as to prognosis, and I pass on to treatment. Generally speaking, the rule may be laid down that *no one can be given the proper attention at home*, and it is always justifiable to have the patient removed from home, and most properly to a hospital. The treatment of insanity is as plain and as rational as in any other disease. An analysis of the case will readily show this. Insanity being a symptom, we naturally ask, of what? And a careful examination will, in the majority of cases, give you a definite reply. We have to deal with abnormal intellectuation, a destruction of the harmony between material causation and mental effect, and it is for us to decide whether this disturbance of the general harmony be due to false impressions being conveyed to a normal brain; or to improper conduction or correct impressions to a normal brain; or, the natural impression being conveyed correctly, we have an improper recognition, deduction, and response. If the first, the cause of the trouble is traced to receptive,

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the second to conductive, the third to formative, sources. In this way we may discover, always approximately, and, generally, with accuracy, the nature of the cause.

The treatment of insanity is divided into medicinal and moral. Under the former head, it would be impossible to lay down definite rules. The removal of the cause, when possible, by medicaments or surgical metbods, is, of course, understood; though it is not generally understood how frequently the cause can be removed by the use of the proper remedies. It is the general impression that the pharmacopœia of the alienist is extremely limited. This is a popular fallacy; none the less a fallacy that it is popular, for there is no class of cases which show prompter or more striking response to medicinal treatment than the insane.

Having determined what we believe to be the cause, we must not lose sight of the fact that this may not be the *only* cause, and must treat not only that, but whatever is found to be abnormal in function, whether it seems to bear on the case or not. If an intricate piece of mechanism becomes irregular, the machinist, having examined it, and found one cog missing, does not expect it to resume its former regularity with the restoration of that cog, but searches for further causes. How much more carefully, then, should the physician seek, in this most complex, living mechanism? Briefly, the general tonicity of each organ must be restored before special results can be anticipated. Amongst the readily recognized conditions upon which insanity frequently depends are malaria, hepatic abnormalities, indigestion, intestinal irritation, pulmonary disease, gout, syphilis, etc.; and, deserving of special mention is, renal disease, and here it is that the cause may frequently be traced, of many cases of "unknown" origin. There will not infrequently be found cases in which serious renal lesions are present, and yet, there can be no albumen detected by the usual chemical tests; and the busy physician, having tested the urine in this way without result, eliminates this possibility when summing up his points for diagnosis. The microscope will detect casts in many specimens of urine which

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do not respond to chemical tests, and the ophthalmoscope lends important aid to the search. Removal of the cause, or of anything which might be the cause, is, then, the very important *rôle* which is assumed by medicinal treatment; and it would be the height of folly to underestimate its value.

Before passing on, it would be well to disabuse the public mind of a very widespread fallacy—that, of the drugs used in hospitals for the insane, narcotics form the principal part. Never was there such an error, nor one so likely to do harm; and I assert, with confidence, that the average physician, in private practice, will use more opiates, in one month, than I do in my hospital practice in one year.

When a patient becomes so frenzied as to be beyond our power to control him, a hypnotic is given to prevent him injuring himself, and to calm him sufficiently to allow of his being influenced by moral means; and in these cases *hypnotics* are used, *not narcotics*. The ones we have found most reliable are (I name them in the order of their reliability, according to my own individual preference,) chloral, hydrobromate of hyoscine, sulfonal, and paraldehyde. Others there are of some merit, but as the four mentioned will prove equal to all demands, it is unnecessary to mention them here; and I wish further to impress the fact that it is with few cases that these means are ever necessary; and more rarely still, that they are necessary with the same patient more than once a week.

With one more protest, in this case largely an individual one, I will pass to the consideration of the other division of treatment. This protest is given most conscientiously, and I feel strongly the truth of what I express—an opinion which I have not "jumped at," but which is the result of observation of, and experiments with, many cases. This explanation is necessitated on account of its opposition to the teachings of so many and such high authorities. On account of this, and the reverence due them, which I, with others, freely give, I feel the explanation proper—I say ex-

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planation, for I am too earnest to consider that there is any need for calling it an apology.

This protest is *against the use, for lengthened periods, of bromide of potassium.* I have arrived, slowly, but firmly, and in spite of my prejudice in its favor implanted by the authorities above referred to, at the conclusion that bromide of potassium, administered, as is usually recommended, in full doses, and continuously, is not only of *no benefit,* but is *positively injurious;* and while it may, and does, keep in abeyance a maniacal, or an epileptic state, *it does so by devitalizing the entire economy,* and will *as certainly shorten life as it will paralyze intellectuation.* I do not wish to be understood as claiming that it never does good, for it is a most valuable remedy when applicable. It is the *continued use,* for *lengthened periods,* that I would condemn.

And now, as to the better half of treatment—viz: Moral treatment. Under this head may be included—removal of any mental cause, diversion, exercise, hygiene, regularity of habits, supervision, sympathy, restraint, and the correction of immoral tendencies.

In bringing about the removal of mental causes, we have chiefly to consider the removal of the patient from home surroundings. This, alone, is of decided, and usually immediate, benefit. The cares of home-life, the over-indulgence of loving relatives and friends, the espionage and suspicious glances of those around him, the petty worries arising from mistaken kindness, the encouragement of delusions and discouragement of effort, the signs of fear so often apparent in the actiont of visitors, the witnessing of the detriment to business, and the knowledge that he is the object in which the whole confused state of home affairs centres—each, and all, tend to increase the aberration, and to combat all efforts towards recovery. The trip to the hospital brings him into contact with new scenes and faces, and the entire change of surroundings can hardly fail to arrest the attention, which is a *sine qua non* in the treatment of insanity. The patient's attention once gained, and held, means a great step on the road to recovery. It is this that

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makes the removal to a hospital so desirable, and even necessary.

Diversion.—This term is used here in its literal sense. The word means a turning away from, and it is just that which we attempt. The turning of the patient's thoughts from himself and his delusions is a matter, frequently, of the greatest difficulty, requiring diplomacy and skillful tact. Egotism, in its fullest meaning, is one characteristic which may be said to be common to all cases of insanity. It is this egotism, and self-centred contemplation, which we should strive to undermine. In order to do this, every patient, not too violent, or not physically disqualified, is required to attend any amusements or exercises held in the hall devoted to this purpose. As an illustration of what is done in this line in hospitals, I give the weekly programme of this institution:

Monday night, dancing (no spectators allowed). Tuesday night, prayer-meeting, conducted by one of the ministers of the town. Wednesday night, magic lantern exhibition. Thursday, calisthenic exercise. Friday, dance (the public being allowed to attend). Saturday night, choir practice and music. Sunday night, song service. Sunday, religious services by the town ministers, the different denominations alternating. During the day, if the weather is inclement, music and games in the hall are provided. In each ward are found games, such as draughts, backgammon, cards, etc., and access to the library can always be had. These, with the many newspapers donated, form a constant round of amusements, which serves, in most cases, to divert the attention even of the most stolid.

Exercise.—This is the most valuable aid in our treatment. Employment of the hands is usually followed by diversion of the thoughts. For all who are able, work is furnished, varying according to the strength of the patient. The hours for work are also limited. This work is not compulsory, but every power of persuasion is used to arouse in each one the desire to do *something*. Those who are not able to work are taken for a walk as frequently as the weather will permit.

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This, with the calisthenics and dances above mentioned, furnishes an abundance of healthy and curative exercise. Hygiene is observed by the maintenance of perfect cleanliness in person, clothing, and surroundings; the thorough ventilation of the wards and buildings; the provision of a sufficiency of clothing and precaution against any sudden change in temperature.

The establishment of regular habits is a necessary sequence of hospital life. The hours for rising and retiring are fixed, and subject to variation only at the instance of the physician in charge; so, too, with the meals, the hours for walking, and for bathing—all are fixed, and there is neither variation nor delay. The patient, on admission, is told that he is expected to adhere to the rules, and objection is rare. It might seem to one who is a stranger to hospital customs, that the sudden change, from unhampered liberty to strict adherence to rigid rules, would meet with opposition; but this is rare, for when kindly and respectfully told the rules, the reasons therefor, and benefits to be derived from them, the most obdurate will comply without the use of any compulsory methods. The force of example is strongly persuasive; seeing hundreds of others yielding unquestioning compliance, the new arrival follows without resistance. The only cases with which we are apt to have trouble are those who have been deceived in being brought here; their friends, in order to save themselves a little trouble, tell them that they are going somewhere else, or that they are only coming here to be examined. The wrongfulness of this course is apparent—the moral wrong, to the person telling the wilful lie, we leave to his own conscience, but it is our duty to call attention to the injury done the patient. Such a course prejudices him against the asylum authorities, who, the patient thinks, caused him to be brought here, and it requires months of acquaintance to gain the confidence of him who was so shamefully and unnecessarily deceived.

The supervision exercised over all patients is constant, but differs from that he has received at home in the important particular, that he is not the only one so watched, and

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he recognizes that it is for the good of all, and not a system of individual espionage. The fact of medical supervision is a source of satisfaction to him, too, as he sees that any irregularity, however trivial, is recognized and promptly attended to, and he feels proud that his physician takes such an interest in him. He feels, in addition, a sense of security, based upon the knowledge that neither his physician nor his attendants will allow any deception or injury to be practiced against him.

Sympathy.—This is the key to your patient's heart, and is an indispensable attribute in the management of the insane. Without it, you fail to receive the confidence of your patient, and further effort is useless; with it, you do inspire confidence, which, once attained, makes the task easy. To explain how to acquaint the patient with the fact that he has your sympathy, is an impossible task. It would not be possible, in generalizing, to explain how individual characteristics are to be taken advantage of, and individual barriers removed; tact is the only guide, and experience the only teacher. Any indication of pity, of ridicule, or of censoriousness, will prove a barrier to its realization.

Restraint.—Here, again, the prevailing popular idea is entirely at sea. The idea of force clings to the ideas of "lunatic asylums," with amazing pertinacity. This idea, begotten in the barbarous days, when crude workers, building on theories still more crude, and as cruel as senseless, builded the word *lunatic*, which word now is fitly represented by the term "moonshine," is a disgraceful, even if traditional, heir-loom of that barbarous day. The word "*lunatic*" should be abolished, as, indeed, should the word asylum. "Hospital for the insane" is expressive of the methods of to-day, and this term only should be used. The idea of force has disappeared with the cessation of the use of the crib, the bastinado, and the tread-mill. Chains and scourges no longer form a part of an institution's equipment, but kindness, and persuasion, and sympathy, have taken their place. Kindness is the rule, and the rule is insisted upon. The only methods of restraint ever resorted to are the cam-

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isole, and the muff, and seclusion. The camisole consists of an ordinary loose-fitting jacket, made of heavy ducking, and buttoning behind; it has very long sleeves, which can be tied together at the ends, thus effectually preventing the use of the hands, without any possibility of injury to self; it is put on over the other clothing, and the skin cannot even be abraded, as there is nothing tight about the garment. The muff is also made of ducking, and consists of cloth cuffs, protected by a roll of canvas which covers the forearm to the elbow; this allows the use of the arms to a limited extent, but prevents the use of the hands or fingers.

By seclusion, we mean the locking in a room, apart from the other patients. The rooms used are *not cells*, nor are they *dark*, but are *well-lighted, thoroughly ventilated, clean*, and *comfortable.*

Restraint is only resorted to with patients who are disposed to injure themselves, as in suicidals—when most despondent—masturbators, at times, and those who tear off their clothing or remove surgical dressings.

It is rare that restraint is necessary, and it is still more rare that the restraint is necessary for more than one or two hours at a time. Attendants are not allowed to restrain patients without an order from the physician, so that abuse is almost impossible. Experience teaches that a little kindness does more to win confidence and respect than any amount of restraint; and we find that there is no patient, however violent and excited, but can be quieted and soothed, even cheered, by a half-hour's conversation.

The impression that force is used in institutions for the insane is a most erroneous and unjust one, and has done much to cause delay in sending friends to the hospitals—a delay much to be regretted, as it has allowed recent and curable cases to become chronic and incurable, and filled the State Hospitals with these incurables, to the detriment of new cases, which are, on account of the crowded state of the hospitals, debarred admission; and thus, in time, these new cases become chronic and fill the places made vacant by the diseases and death of the present inmates.

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The need of increased accommodations for the insane in our State is a crying one, as has been constantly and forcibly presented by the Superintendents of all the State Institutions.

This, however, is foreign to my article, and I will say no more than this, that if the physicians throughout the State would give the subject proper thought, the legislators would be a little more ready to do their duty to this neglected but deserving portion of their constituents.

The correction of immoral tendencies is another delicate duty. The most usual display of immorality is in the form of profanity, vulgarity, obscenity, lasciviousness, combativeness, suicidal tendencies, masturbation, and the sacrilegious exaggeration of religious fervor. Encouragement to better things, and the inculcation of a higher moral tone, is a constant effort on the part of all—by whatever means, and at whatever time, seems most applicable to the individual. Earnestly calling attention to the uselessness and folly of the habit frequently avails; but it is always a difficult and delicate subject, and must be approached with tact and caution.

Masturbation is a most disgusting and revolting accompaniment of many forms of insanity, and must be carefully guarded against, as it is a habit as pertinacious as it is objectionable. This is not to be considered the cause of the diseased mental state except in rare, very rare, instances; but is the effect of the disturbed mental and moral equilibrium; and masturbation should no more be considered as the cause of insanity than raving should be considered the cause of mania. This view is supported by the fact that, with the restoration of the mental tone, the disposition to the habit lessens, until, with entire recovery, comes the complete cessation of, and disgust for, the habit.

The religious services, held regularly, as above stated, tend to keep up an interest in the religiously inclined, to restrain to proper limits any excess of fervor, and in those who have given the subject proper thought an interest is aroused which frequently works for moral, as it always does for mental, good.

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In brief, then, the patient admitted to one of our State Institutions depends, for restoration, upon the following treatment: Change of scene, varied diversion, freedom from anxiety, sympathetic supervision and attention by the medical officers, and kindness from all. His habits are regulated; the proper diet, both as to quantity and quality, assigned and provided; he is suitably clad; and is treated as a man, and not as a felon. His every need—physical, mental, and moral—is recognized and supplied. The watch-words of hospital management are kindness and sympathy; and, in the eyes of the Superintendents and other officers, there are no faults so unpardonable in an employee as ridicule, harshness, or force.

Before closing this article, already longer than was my intent, I wish to ask each physician who is called upon to inquire into the sanity or insanity of a patient, if he will not heed the following advice in filling out the replies to the usual questions:

Do not jump to conclusions, but examine thoroughly.

Do not form an opinion on the testimony of friends (?), who may be scheming to get rid of the patient.

Do not send to a hospital a man who is only suffering from senility or delirium.

Do not send cases of contagious or infectious disease to the hospital.

Do not be afraid of telling too much; the more told, the better for the patient.

Do state any heredity traceable.

Do answer every question rationally—not saying "I don't know."

Do state why you consider the patient insane—not saying "from his actions," or "from his conversation," but state what was abnormal in either.

Do give an idea as to his characteristics before becoming insane.

Do remember that the hospital authorities know nothing of the case except what you send them.

By heeding these points, you will do your patient justice

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and increase the respect of your readers, besides avoiding the anathemas, and winning the blessings of the much-abused "asylum physicians."

Art. V.—Electrolysis in the Treatment of Rectal Strictures. Illustrative Cases.*

By SAMUEL T. EARLE, M. D., of Baltimore, Md.

RECTAL SURGEON TO THE UNION PROTESTANT INFIRMARY, BALTIMORE, MD.

I would like to call attention to the report of three cases of *benign stricture of the rectum treated by electrolysis*, and make some general remarks upon the subject.

Electrolysis, as first announced by Nicholson and Carlisle, in 1800, is the process by which a compound body, in fusion or solution, is decomposed by passing through it an electrical current of sufficient strength to overcome the chemical affinity between the component molecules. Dr. George H. Róhe, in a recent article on "The Electrolytic Decomposition of Organic Tissues,† says:

"In electrolysis of organic tissues, there are probably several processes to take into account. In the first place, it is extremely likely that the water of the tissues, with certain salts, acids, and other compounds in solution, yields to the disruptive power of the current, and hydrogen, with other electro-positive ions, are set free or combined at the negative electrode, while oxygen and negative ions are separated at the anode.

"But while this liberation of atoms and molecules takes place at the terminals of the battery, what is going on in the track of the contrary processions of ions between the electrodes? In other words, is there any interpolar action of current, and in what does it exist? In my opinion, there is of necessity a loosening or shaking up of the interpolar compounds, which results variously, according to the vitality of the tissues. If the current is of moderate strength, and the tissues have the normal degree of vital resistance,

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*Read before the Semi-Annual Meeting of the Medical and Chirurgical Faculty of Maryland, October 11th, 1890.

†*New York Medical Journal*, December 1st, 1888.

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the molecular disturbance will probably result merely in an improvement of nutrition, in accordance with the general biological law that moderate stimulation produces increase in nutrition. If the current is of excessive strength, there will probably be some breaking up of the compounds, which may affect nutrition unfavorably.

"Actually, we know really nothing of the interpolar effects of electric currents in organic tissues. In inorganic compounds, with their simple and stable organization, the electric current may not produce any interpolar change, although the theory of Clausius rather favors the view that interpolar decomposition occurs. But in organic compounds, with their more complex and unstable composition, we can readily understand that the continual re-arrangement of molecules, under the influence of electrolytic construction, may so disturb the harmonious relations of the molecules as to render decomposition more easy. If the tissues are normal, recovery and repair of slight defects may promptly follow; but in the case of pathological products—inflammatory infiltrations, new growths, serous effusions, etc.—it stands to reason that a molecular disturbance of some extent, or continued for some time, may produce such a modification of nutrition in the tissues as to promote its regressive metamorphosis. That this actually takes place, I firmly believe, although I am unable to give an exact demonstration of the process. I am also strongly of opinion that in many pathological products, or tissues, a retrogressive change, begun under the influence of an electrolytic current, is kept up after the immediate action of the current has been discontinued."

I have made this very liberal quotation, because it expresses so well the present theory on electrolysis.

Dr. Robert Newman, of New York city, claims,* with good reason to have been the first to use electrolysis in the treatment of rectal strictures in 1871. In the same article he refers to its use, in 1872, by Dr. Beard; in 1873, by Dr. Groh, of Olumtz; and in 1875, by Dr. Lente. While the results obtained, even in these early days of its application to such purposes, seems to have been satisfactory to those using it, in spite of the very weak currents used and the want of means for measuring the amount they did use, we

*In his article on "Electrolysis in the Treatment of Rectal Strictures," in *Journal Amer. Med. Ass'n*, May, 1890.

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can confidently look for much better results with our recently improved methods of generating and applying the current; our means for measuring quite accurately the amount we use, and from the greater strength of current we now employ.

It is very important to have a battery capable of furnishing the amount of current necessary to accomplish the desired results; and as a means for ascertaining that fact, we should also have, and use it at each sitting, a reliable galvanometer for measuring the amount of current used. There are so many batteries on the market, that one is so likely to be led astray by the many advantages claimed for each. I should by all means advise that every one should inform himself upon the subject before undertaking it, and know exactly what he needs, and make his own selection of the battery that will best meet his requirements. For brief and concise information on the subject, I would refer the reader to Lockwood on *Electrical Measurements;* Massey on *Electricity in Gynecological Practice*, and Engelmann on *The Use of Electricity in Gynecological Practice.* I would briefly state, we need a battery that will not polarize quickly; one of sufficient electro-motor force to overcome all resistance, and one of sufficient current strength to give from 100 to 125 milliampéres of current after all resistance has been overcome. This has been the amount of working current I have found necessary to accomplish the desired results in these cases, and is as much as the patient can bear without an anæsthetic. After having tried several of the most approved batteries, I have found by far the most satisfactory to be one composed of from thirty to fifty cells of the Leclanche pattern; it is also reasonable in price (one of the most approved varieties of that pattern having recently cost me sixty-five cents a cell). It is not portable, however—an objection that can be laid at the door of all batteries I have ever seen capable of doing efficient electrolytic work. It requires very little attention; the cells are joined up in series, and are connected with a switch-board, where you can turn on the desired number of cells. I have a Waite and

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Bartlett milliampére meter, which, I think, is fairly accurate.

Four sizes of metallic electrodes, conical in shape, and varying in size from one to three and three-eighths inches in circumference, are all that I have found necessary for practical purposes. These are used as the negative electrodes inside the rectum; while a large piece of absorbent cotton, wet in a strong solution of salt, is used under the positive electrode on the skin of the buttock, if the stricture is low down in the rectum, but just over the pubes if high up.

I would like to say a word, in passing, of the decided effect of the salt solution in assisting to overcome the resistance of the skin. As an instance, when using twenty-six cells with the cotton under the positive pole wet with water, I only got twenty-five milliampéres of current; without any other change than merely wetting the cotton under the positive pole with a strong solution of salt, I got one hundred milliampéres from thirteen cells. In treating these cases, I let each sitting last for ten minutes, twice during each week if the case is aggravated, one if mild.

Sometimes, when there is much irritation of the rectum, the currents of the strength mentioned above may increase the irritation, as will be seen in one of the cases which I here report, when the strength and frequency of application have to be lessened.

Report of Cases.—*Case No.* 1.—Mrs. H., white, æt. 30 years. I first saw her January 25th, 1888, with Dr. Rohé, who kindly sent her to me. Has difficulty in having evacuations from her bowels for seven or eight years. Has a history of syphilis contracted about fourteen years ago. Was treated, two years previous to coming to me, for stricture of the rectum—first by gradual dilatation; then by linear proctotomy, which was not followed by subsequent dilatation as it should have been, and consequently was left in a worse condition after than before the operation. At the time I saw her she rarely had any but very fluid stools, and, when moulded, were very narrow and flat, and caused excruciating pain.

On examination, I found the sphincters only partially closed the bowel, leaving the scar resulting from the linear

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proctotomy between their cut ends. About one inch above the site of the external sphincter was a very tight stricture—so tight that it would admit little more than the ordinary probe; there was a large indurated mass, about the size of a small lemon, in Douglas' cul-de-sac; the anterior wall of the rectum was very much indurated; there was a constant discharge of a muco-purulent fluid from the bowel, and she suffered very much from dysmenorrhœa, and during the act of copulation.

January 30th, 1888. Commenced dilatation of the stricture by electrolysis, using from ten to fifteen cells of "Barrett's Chloride of Silver Battery." The first negative electrode used to pass the stricture was only a little thicker than a match, which passed with comparative ease after the current had been turned on for several minutes. At the same sitting I finally succeeded in passing another electrode one inch in circumference, but only after allowing the current to pass through it for several minutes while being gently pressed against the stricture. I continued the current until it passed back and forth through the stricture with perfect ease.

January 31st. The patient reported that the pain, which was not very much, caused by the treatment the day before, had soon subsided, and she had had two almost painless actions that morning without the aid of a laxative.

February 6th, 1888. Passed an electrode one and a half inches in circumference. From this date on to April 23d, 1888, I gradually increased the size of the electrodes until I passed one on this date that measured two inches in circumference. Her condition began to improve with the use of electrolysis; the muco-purulent discharge gradually grew less; painful menstruation got very much better; stools were passed with less and less pain, and the neoplasm in Douglas' cul-de-sac gradually disappeared.

May 27th, 1888. There are some indications of ulceration of the mucous membrane of the nose, associated with constant headache. Up to this time I intentionally avoided all constitutional treatment. I now put her on iodide of potash, which controlled the headache and relieved the nasal symptoms in a few weeks. I continued the electrolysis at varying intervals, from once in two weeks to as often in several months, until November, 1889, since which time I have not used it.

October 29th, 1890. I saw and examined her; she has no trouble at all with her bowels; there is no discharge of

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muco-purulent matter from the rectum; evacuations are regular, although if loose, they cannot be controlled, on account of the old scar from the proctotomy. On examination, I found no sign of the old neoplasm in Douglas' culde-sac; the induration in the anterior wall of the rectum is also gone, and there only remains of the old stricture a narrow band about an inch above the normal site of the anus, symmetrical in shape, and perfectly dilatable to the size of the finger; it really acts, in part, the place of the sphincter, which only does partial duty.

Case No. 2.—Mrs. E , white, æt. 45 years. Has a history of ulceration high up in the rectum, commencing in the Fall of 1887, which got so much better before coming to me that it was not mentioned. She presented herself to me January 23d, 1889, suffering very much from a growth, about the size of an English walnut, on the side of the anus, which had been very much irritated from hypodermic injections into it of carbolic acid. After its removal, this growth was unfortunately mislaid, and could not be examined carefully; but from its dense character and general macroscopical appearance, I am quite sure it was a fibroid. I also removed at the same time from the wall of the rectum on the same side, a considerable amount of dense fibrous tissue that extended up the wall for about two inches. I removed all I could feel. This tissue was examined at the Pathological Laboratory of the Johns Hopkins' Hospital, and pronounced benign in character. The case went on to do well, and when nearly healed, the patient returned to her home in Washington. I subsequently learned from her (in June, 1890,) that she never got entirely well, but several months after her return home, symptoms of ulceration made their appearance again in the form of a muco-purulent discharge, tenesmus, pain, and frequent stools.

These symptoms continued to grow worse up the time of her return to me, in June, 1890, when she was suffering very much.

On examination, I found the rectal walls very generally infiltrated, the calibre very much narrowed, and about three inches above the anus a very narrow constriction, which would only admit the end of a small electrode, about one-fourth of an inch in diameter. For several weeks I made applications to the inside of the rectum of a solution of argenti nitras gr, viij: to aq. ℥j, and ordered a solution of boracic acid to be injected night and morning, but these did not do any good.

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June 14th, 1890. Commenced treatment by electrolysis, and have used it since then on seventeen occasions. After several applications, her symptoms began to improve decidedly; the pain and tenesmus grew less; the discharge decreased very much, and she soon began to have moulded stools.

November 10th, 1890 Has some return of the irritation about the rectum, due, I think, in the first place to a long walk taken about two weeks ago, and subsequently kept up by the use of too strong currents in applying electrolysis—a precaution that has to be looked out for in the varying conditions of the parts. On examination, I find the condition of the rectum has improved very much—the infiltration having almost entirely disappeared, the stricture reduced to a narrow band of constriction and very flaccid, and the skin at the verge of the anus has lost the unhealthy, œdematous appearance it formerly had. The case gives many promises of a perfectly satisfactory termination.

Case No. 3.—Mrs. M., white, domestic, æt. 40 years. Presented herself September 10th, 1890. Has had a mucopurulent discharge from her bowels for several years, with pain and tenesmus attending the act of defecation—the latter symptom only appearing recently. On examination, I found a fistulous opening about one and a half inches to the left of the anus, the discharge from which contained fœcal matter. On introducing the finger, it met with a dense constriction about one inch above the anus, which would not allow the finger to pass. A probe passed through the fistula, penetrated the rectum just above the lowest part of the constriction, and could be felt with the finger. I laid this fistulous tract open, together with the lower part of the constriction. I could then pass my finger into the constricted part of the rectum, and found the constriction to exist as far up as I could reach with my finger; the walls of the rectum also were very much infiltrated. There is no history or symptom of syphilis, or dysentery; no special trouble with either of her two labors, the last of which occurred fourteen years ago. The discharge has no peculiar odor.

October 1st, 1890. Commenced the use of electrolysis, using it twice each week for ten minutes at each sitting, and used one hundred milliampéres of current each time.

November 9th, 1890. Is very much better, the discharge having grown less, almost ceasing at times, and then returning slightly; the infiltration of the walls of the rectum has

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almost disappeared, and the stricture is very flaccid. I attribute the rapid progress in the improvement of this case to the uniformly large currents I have been able to use. This case also promises to be a great success for electrolysis.

1431 *Linden Avenue.*

ART. VI.—**Uric Acid in Hysteria.***

By G. T. M. DUNLAP, M. D., of Chattanooga, Tenn.

I want to suggest, though I may not be able to prove, that hysteria is a real disease, and is, in many cases, caused by retained urinary products; that it is thus related, in its primary causes, with gout, periodic headaches, and puerperal convulsions.

The manifestations of hysteria seem often such evident proof of mental or moral obliquity, that we are all apt to set down its victim as a fraud, and most of the apparent suffering as a pretence; but while particular symptoms are often feigned or exaggerated, I believe the suffering is usually very real, and sometimes severe.

The apparent deceit is often a pitiful attempt to demonstrate suffering, that is not accounted for by any gross anatomical lesion, and that gives only a confused image of itself to the brain of the sufferer, because the very nerve-centres themselves are subjected to the irritation.

The wise old Dr. Emmet formulated the rule that when a woman complains, something ails her; and if we cannot find out what it is, our failure is due to our ignorance, not to her deceit. In his attempt to dispel this ignorance as to the cause of obscure neuroses in women, the gynæcologist looks for, and often finds, some uterine or ovarian disorder, and concludes that he has found the *cause*, while he has in fact only found another *effect* of a still hidden *common* cause.

Every author that I, at least, have consulted as to the causes of hysteria places disorders of the genital system first, giving the second place to physical impressions, while

*Read before the Chattanooga Medical Society, November 21st, 1890

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improper nourishment and occupation are considered as occasional and subordinate causes.

I should directly reverse this order, and put improper diet and occupation, resulting in imperfect elaboration of urea, as the cause of causes; and then mention all others as secondary.

Suppose you do find an engorged uterus or tender ovaries, it is quite probable that there stands as sponsor for them a liver that, from its proportions and weight, contains seventy times as much stagnant blood, and from its position and environment impedes effectually the disgorgement of the blood from the pelvic organs. Looking farther, you find a pair of lungs that would be almost surprised into collapse to find their residual air changed once a week by a wholesome diaphragmatic respiration. With the vital organs dominated by the great blood-making and re-nerving organs working half time, we will find them all disordered in function, not as a reflex neurosis from the tender ovary, but by long-continued faulty action furnishing faulty blood to make the ovary tender.

I do not deny that indigestion, mal-assimilation, and their consequent mental vagaries may result from sexual disorders; doubtless they do so in specific, traumatic, and puerperal cases, but more often the alimentary disorders of infancy are projected through childhood, antedating the sexual disorders by a dozen years or so at least. Moreover, children often exhibit well-marked hysterical developments after prolonged confinement from accident or disease.

That genesic disorders alone do not cause hysteria, is further indicated by the rarity with which we see its symptoms in hard-working women. I can now remember very few instances of those manifestations in a laundress, or any woman who actually did the hard work of housekeeping, although I have seen pretty nearly every form of pelvic disorder among such women. From the hardness and exposure of their lives, they are far from exempt from such suffering. In fact, they generally do sustain such disorders, with more or less local suffering according to circumstances, but with remarkable freedom from sympathetic

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disorders. They enjoy this immunity simply because hard work induces free appropriation of oxygen in air and water, and an appetite for the coarser foods. By these means the life-force can fulfil Herbert Spencer's definition of life—*i. e.*, the continual adjustment of internal relations to external relations.

That we find these nerve disorders so often in women during middle life, is due not so often to disordered function of the generative system as to lack of functional activity of the muscular, and to those habits of living by which several hundred weight of potential force are provided for each day that do not become actual. The child, by reason of its irritable and contractile protoplasm, can hardly be prevented from taking adequate exercise; while the elderly person learns to regulate the diet according to the exercise taken, and senility renders the nervous system tolerant of abuse. These sedentary habits are doubtless often encouraged because of real or fancied uterine disease, thus making such disease seem the cause of its own cause.

We find, then, this aggregation of contradictions known collectively as hysteria in women of the upper strata of society, who, being exempt from the necessity of work, fail to supply its place by any absorbing occupation or enforce on themselves habits of vigorous outdoor exercise. Houses are made into infirmaries, instead of being only shelters.

Little exertion induces little appropriation of oxygen by the lungs, and less excretion of carbonic acid from them. Carbonic acic being a congener of urea, its retention complicates the other excretions. Such cases travel around a circle of cause and effect; it matters little at what point of the circle you start, you come to it again. The circle consists in unused muscles, sluggish circulation, unaerified lungs, overloaded urine, and poisoned nerve-centres. Again, the poisoned nerves are unable to excite muscular activity, the lungs inhale less oxygen, the proteid tissue-wastes degenerate into uric acid instead of being oxidized into urea; and so the stupid round Robin goes on. Such patients, too, often drink very little water—many a woman taking scarcely a pint in twenty-four hours—thus depriving the urea, that

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is perfectly elaborated, of enough fluid to separate it from the blood.

Besides this—what we may call auto-infection from degeneration of their own tissues—most town dwellers live too much on animal food. Meat, while easy of digestion in the stomach, is already on the down grade of tissue change, and becomes readily converted into extractions fit only for excretion, and needing the very reverse of sedentary habits to prevent it from overloading the excretory organs.

The physiologists tell us that uric acid is a less oxydized product of proteid metabolism than urea; that one molecule of it, by oxidation, is split up into two of urea and one of mesoxalic acid—the urea being fit for excretion in a fluid menstruum, while uric acid is very insoluable in water, and so unfit for such excretion.

We suppose, then, uric acid is carried to the kidneys, and being in limited amount a normal excrement, it excites their secretory functions; but when much in excess, it is liable to over-stimulate to the point of paralysis, thus shutting the door against its own escape and turning it back into the circulation. That such paralysis may be caused independently of the flow of urine, Heidenhaim has proved. His experiments were to prove that the epithelium of the uriniferous tubules had a secreting power separate from the filtering power of the Malpighian bodies. He divided the cord below the medulla, thus arresting urinary secretion; then injected indigo carmine. By subsequent examinations he found the same deposited, not in the glomeruli, but in the tubules, and in the act of secretion by their cells. Having no urinous flow, it was not washed from its place of deposit. By two successive injections, he found the second very imperfectly secreted, as if the secreting power were exhausted.

Such exhaustion apparently takes place in an hysterical attack only. Unregenerated urea is the stimulant, and the passive filtering function of the Malpighian bodies under vaso-motor control is retained and exaggerated, giving the characteristic limpid flow. This normal appearance of urine during an attack is misleading; but if we examine

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into the matter between attacks, we shall find either some abnormal urinary sediment, or some evidence of rheumatic or other taint, showing the retention to be habitual.

I believe the physiologists have not yet demonstrated a nervous excretory centre; but when they find it, the pathologists may find what is the particular reflex that causes globus hystericus, and the co-ordinating centre for emotion and the *will* power as distinguished from the *won't* power.

For the present, I believe that hysterical symptoms are not so much true reflexes as direct results of lithæmic poisoning to the nerve-centres. Foster says that uric acid has been found in the *brain*, as well as in the pancreas, lungs, heart, and liver. We are all familiar with its salts as gouty and arthritic deposits. Cholesterin, though not a renal, but hepatic sediment, is found in abundance in white nerve substance; so the phosphates and oxalates sometimes excreted from the kidneys are also found as calculi in various *glands*, where they must have been deposited by the blood.

These all receive abundant recognition when, by long accretion, they have assumed gross proportions as vesical or renal calculi; but who can estimate the disturbance they must cause when, by temporary arrest, they are retained in the blood? Either they must exist in solution or as minute crystals, smaller than the blood-cells, and so carried with them into the very substance of nerve-centres and nerve-trunks.

The pain and inflammation caused by the various gravels and calculi are usually admitted to be among the most exasperating that human flesh is heir to. So the disposition of the lithæmic sufferer is notably sour and irrascible, cross and angular. The true reflexes, too, are numerous, and apparently greatly in excess of their primaries.

Let us not be surprised, then, when these agents, as microscopic bodies or invisible gases, produce variations in temper, emotion, and conduct that seem utterly unwarrantable. I have sometimes wondered, while admiring the beautiful crystaline forms of urinary sediments, what sort of an image the sharp-toothed saw of a triple phosphate would present to the sensorium if set swinging on a nerve

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filament? Or what more exquisite penitential peas could be devised than the clear-cut crystals of oxalate of lime imbedded in a nerve-centre? When seen in contrast with wounds and fevers, an hysterical patient exasperates us with her loud complaints, so out of proportion with the apparent disease, we feel inclined to administer such carminitives and aromatics as ipecac and assafœtida, leaving the discovery of the cause of the attack to a more convenient season.

Examination of urine, if made at all, is hasty and satisfied with negatives.

That we find no albumen, no sugar, and no great deviation from normal specific gravity, is not enough. Close questioning should elicit the fact, if there is variation in quantity and appearance at different times. Examination should be repeated several times at intervals. I know it is a bother; and *why* it is I don't know, but vesical disorders seem to be more reluctantly reported than any other without direct questioning. Repeated examinations are necessary, for any form of deviation from the normal is shown much more at some times than others, and particularly so in these cases. Then, too, some important sediments form in very small crystals, easily overlooked.

I am indebted to Dr. A. B. Conklin, in the *Medical World*, for his analysis of gout, rheumatism, and some nervous disorders, as having their common cause in lithæmia. He calls attention to the frequency with which these attacks follow a period of secreting colorless urine of low specific gravity, and that the cessation of such attacks is accompanied or followed by excessive excretion of urea, uric acid, or the urates. I have repeatedly noted the same sequence of events in the nervous headaches of women, that are usually attributed to uterine disorders.

It is in pursuance of Dr. Conklin's thought that the place of hysteria in the list of lithæmic disorders has occurred to me, and I am almost surprised to find how far my experience bears out that theory. In reading backward in the notes of urinalyses that I have kept, I find that in every case, in which I remember hysterical tendencies, of which

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I have kept the urinalysis, I find urates, uric acid, phosphates, or oxalates recorded, although at the time of observation I did not clearly associate them as causes. Often there was no appreciable derangement of uterine function or distinct pelvic disease, though I sought for them religiously, almost hoping to find some tangible enemy to attack.

The case of Mrs. X. lives in my memory, perhaps because of the numerous and pressing invitations that came from her between 12 and 3 A. M. These are also the favorite hours with gouty old gentlemen, I believe. On these occasions the patient exhibited an extensive gamut of emotional demonstrations, and her attendant exhibited a range of therapeutics from emetics to spiritual consolation in the form of gossip. She was a woman about 35, had been delicately reared, had lost the use of one lung from pneumonia in childhood, in consequence of which one-half of the chest was collapsed and the spine twisted. Her symptoms were those of functional heart trouble, pleurodynias, neuralgias, and hyperasthenias, ever new and changing. There was no marked renal or vesical disorder, and only a general hyperasthetic condition of the pelvic organs. I did her the justice to believe her suffering real, but attributed it to the tortured condition of the spinal nerves. But looking back from a little distance of time and space, I see her as one of a gouty family. Her mother and three aunts, elderly ladies, were under observation at different times for different complaints, all of the lithæmic type. The mother exhibited well-developed arthritis of the small joints, urine loaded with urates, and finally died from an attack of acute rheumatism, ending in paralysis of the lungs.

One of the aunts suffered intensely from periodic headaches, and developed valvular insufficiency, with dilatation and hypertrophy.

Another had the periodic headaches, with colorless urine; and the fourth combined the headaches, large joints, and phosphatic urine, with times of well-marked renal disorder.

All were in comfortable circumstances, and lived in about the style that their gouty father had bequeathed to them. These venerable matrons were clear of intellect and sharp of tongue, mutually intolerant, and severe judges of the foibles of their daughters. Several of the daughters exhibited the same unstable nervous equilibrium of my Mrs.

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X., with varying degrees of pelvic troubles, and the sisterly affection of chestnut-burrs.

The little grandchildren of the several families could develop very creditable hysterical symptoms under the restraint of scarlet fever and measles.

So I conclude, that the uric acid and its allies, that in the mothers had become aggregated as deposits, were in the daughters coursing in the blood and teasing the nerve-centres.

That incöordination of thought and emotion in Mrs. X. had as real a physical cause as her mother's crippled fingers.

Just as in puerperal convulsions, the attack is determined by labor, but caused by a constitutional vice that is indicated by albuminous urine, so physical impressions or pelvic suffering may precipitate an avalanche of incoordinate emotion, but it has accumulated in vapors and crystals finer than those of the Alpine snow.

Since writing the foregoing, I notice with interest the observations of Dr. P. Meyer in the *Polyclinic*, of Berlin. He has been gathering notes of all the cases of *chorea* in children in relation to rheumatism and valvular heart trouble, and that while all three symptoms rarely occur together, that rheumatic taint is a frequent cause of both the others.

Hernoch also says that chorea has nothing to do with valvular disease, but that both are due to rheumatism, which in some unexplained manner seems to act on the co-ordinating centres. If, then, the lithæmic poisoning of the muscular co-ordinating centres can produce chorea, let us consider the possibility that there may be such a centre for cerebration and emotion, and that it may be similarly poisoned.

The attention of our readers is called to the advertisement of Messrs. R. A. Robinson & Co., which appears on page 28 of this issue.

This house is one of long standing, and enjoys a reputation of the highest character.

The preparations referred to, we commend specially to the notice of Practitioners.

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Clinical Reports.

A Case of Tubercular Peritonitis Treated by Laparotomy.

By GEO. H. ROHE, M. D., of Baltimore, Md.

PROFESSOR OF OBSTETRICS AND HYGIENE IN THE COLLEGE OF PHYSICIANS AND SURGEONS BALTIMORE; DIRECTOR OF THE MATERNITE; GYNÆCOLOGIST TO ST. JOSEPH'S HOSPITAL ETC..

At first thought, hardly any disease would seem to offer less promise of success after operation than tubercular peritonitis. Knowing the persistent character of tubercular infection in other tissues and organs, we can hardly credit the assertion that cases of undoubted tuberculosis of the peritoneum have been cured, or the progress of the disease arrested by simply opening the belly, evacuating any effused serum or other fluid that may be present, washing out the cavity with hot water or other antiseptic solution, and drainage. Yet, unless we would discredit the diagnostic ability of a large number of competent observers entirely, we must accept the claim that peritoneal tuberculosis is curable by the procedure just mentioned.

The first recorded case of tubercular peritonitis successfully treated by laparotomy and drainage is briefly related by Sir Spencer Wells (*Abdom. Tumors*, p. 210). The patient operated on in 1862 was living in good health twenty-three years after the operation. Since that time over a hundred patients have been treated in a similar manner by a number of operators, and cures lasting for a variable period obtained in a considerable proportion.

About two-thirds of the cases operated upon have been reported cured. It is probable that many unsuccessful cases have not been reported, and that some of those cured have not been tuberculous in nature, but a sufficient number of well-observed cases remains to justify the operation.

The case I have to report is briefly as follows:

Mary Scott, colored, aged 8, has been for some time complaining of an increasing distension of the abdomen, with considerable fever. The temperature varied from 100° to 103°F. The urine was normal in reaction and specific gra-

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vity, and free from albumen. The patient had some cough, but a physical examination of the chest disclosed no serious lesion, although pulmonary tuberculosis was strongly suspected. The distension of the abdomen was supposed to be due to peritoneal effusion, although the signs of liquid were not pronounced. The discomfort due to the distension, the wasting and fever, seemed to me sufficient justification for an attempt to relieve the patient's sufferings by laparotomy and drainage.

On September 1st, an incision was made in the linea alba about two inches below the umbilicus. After cutting carefully through skin, connective tissue, and fascia (there was very little fat), a structure was reached that looked very like thickened peritoneum. The adhesions were so general and firm to the abdominal wall that they could not be separated without using more force than seemed to me justifiable.

Carefully working through the tissue supposed to be peritoneum, I presently landed in a cavity from which escaped partly-digested material that had been ingested that morning (about five hours before the operation). Naturally, I was considerably startled at the unintentional gastrotomy I supposed I had performed. Passing my finger through the opening, I found a cavity of considerable size, which I took (and which will appear in the sequel mistook) for the stomach. With the finger, I separated the adhesions between the viscera and the abdominal wall for a considerable distance, but could find nothing like an abdominal cavity. The intestines were strongly distended, matted together, and universally adherent. There was no fluid anywhere encysted in the abdomen. The wound in the opened viscus, after thoroughly washing it out with hot water, was stitched up with fine silk, but no peritoneum could be found to draw over the line of incision. In view of this, I expressed the opinion that a fistula would result. The external wound was closed in the usual manner with interrupted sutures of silk-worm gut, and dressed with iodoform and creolin gauze.

The patient rallied well from the operation and seemed easier. She did not complain of pain, and her temperature was lower than before the operation. On the eighth day the sutures were removed, and, as anticipated, a fistula was found from which discharged material resembling the contents of the lower portion of the intestinal tube. Dr. J. W. Chambers, who saw the case with me, thought the discharge came from the large intestine.

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The patient recovered entirely from the operation, but emaciated progressively, and died on October 3rd of inanition, partly due, I believe, to the fistula, and partly to the progress of the disease.

A post-mortem examination, made by Dr. N. G. Keirle, showed the peritoneum thickly studded with masses of tubercle, and the intestines and other abdominal viscera firmly matted together and adherent to the abdominal wall. The stomach was found in its normal position, and not involved in the incision. The duodenum and jejunum were enormously dilated. The fistulous opening was difficult to recognize on account of the number of cuts and tears made necessary by the adhesions of intestinal folds, but it is believed to have been in the lower portion of the ilium.

A cavity was found in the posterior part of the left lung, and disseminated tubercle throughout both lungs.

The result showed that the diagnosis had been correct, and that although the disease was not arrested, the operation did not, in my opinion, contribute to hasten the day of death. In fact, I think the improvement of the symptoms justified the operation. The post-mortem demonstrated that it would have been impossible to avoid the incision of the intestine by any amount of care.

18 *West Franklin Street.*

Correspondence.

Observations and Notes About Salpingitis.

It is not my intention, *Mr. Editor*, in selecting this subject, to write a lengthy article, but simply to present a few facts to my professional brethren concerning the large per cent. of women, presenting themselves at the out-door departments of the "Samaritan" and "Soho" 'Hospitals for Women," who are suffering from tubal disease.

For the past two years, in my private practice in Norfolk, Va., I have been impressed that I was dealing more and more with diseases of the Fallopian tubes, from the symptoms described by patients. I have been fortunate in getting in as one of Dr. Bedford Fenwick's private clerks at

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"Soho Hospital," who examines and prescribes for from 125 to 150 women three days in the week; and from my experience under him, with this large amount of material, I am now satisfied that I have not a few unrelieved patients in Norfolk, who are suffering from chronic salpingitis. After these patients have local and constitutional treatment for about three months, with no material benefit, then they are either taken into the hospital at Soho, to be operated upon, or sent up to Dr. Granville Bantock, at the Samaritan, who is considered by far the most successful abdominal surgeon in London.

I keep an accurate account of every one of these patients before and after they are taken in the hospitals. I witness each operation at Soho, and assist Dr. Bantock in every one of his at the Samaritan. I only mention this fact that it may be seen I am so situated that when a diagnosis of incurable salpingitis, pyo-, or hydro-salpinx, is made, in a few days I see the operation and the pathological specimen. I have carefully preserved all of these specimens which they did not desire for the Museum, and have them before me—have given them as thorough study as my limited time would admit.

I find, during the past three months, that 10 per cent. of all the women who come to Soho for treatment, and 9 per cent. of those who come to the Samaritan, are suffering from some pathological condition of the Fallopian tubes; and I have been informed to-day that one of the physicians at the "London Hospital" has recently read a paper before one of the Gynæcological Societies here, proving that 17 per cent. are suffering in the same way at that hospital.

He accounts for the increased per cent. at the "London" in this way: It is situated near a very immoral locality, and they treat a great many prostitutes. It is generally accepted now by the profession that gonorrhœa is the principal cause of salpingitis. No doubt this would explain why the physicians of Norfolk, or any seaport town, will meet more cases of tubal trouble than in an inland city; for it is true

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that we are sadly cursed with much venereal disease in seaports.

From what little I have seen, I feel quite sure that a more careful investigation of the diseases of the Fallopian tubes will not only explain many of those numerous and frequently incurable attacks of peritonitis (often called cellulitis); but also many cases of retroversion and retroflexion, with unyielding adhesions. Of course I do not believe every attack of local peritonitis is due to salpingitis, but I do believe, in a majority of cases, it is preceded by the local peritonitis; and when we have a patient who has repeated attacks of local peritonitis, as a rule we will be correct in diagnosing salpingitis. I am also of opinion, that when the frequency and importance of diseases of the tubes are fully understood, the fashionable custom of diagnosing nearly all of woman's ills as either versions or flexions, and to correct these, in goes the ever-convenient pessary to hold the uterus in the ideal (not real) normal condition, will give way to a more judicious treatment. Then it will be fully understood how useless, and even dangerous, it is to introduce a pessary into the vagina of a woman suffering from salpingitis.

As to the cause of salpingitis, anything which can produce endometritis could be the cause of an attack of inflammation of the tubes; and while I am satisfied that a large per cent. of the cases which I have seen at the out-door department here are of specific origin, yet I can understand how a delicate and imperfectly developed school-girl, upon exposure at her monthly period, might easily set up inflammation of the mucous lining of the uterus. Then this catarrhal condition will extend to and down the plicæ of the tubes; or salpingitis can be caused from an abortion. It is very well known that the cervix is not at all so patulous after abortion as at full term; therefore, it is likely to contract, and, with a placental plug in the canal, obstruct the drainage of septic matter; so that, when uterine contractions come on, this septic fluid is forced upward into the tubes, through them into the peritoneal cavity, and sets up the first attack of local peritonitis. Every practitioner will re-

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call how many times young married women have come with the history, "Have never been well, or even free from pain, since my miscarriage." Some days there will come a dozen young women to the out-door department, giving essentially the same history, which is as follows (fully six or seven of the twelve are young married women; the others, servant girls and prostitutes): "Always well up to a few months (or, it may be, a year or two), since. Now have severe pain at every monthly period; more profuse than formerly; pain in head and back; cannot take a long walk, or stand any length of time; severe pelvic pains; if married, cannot tolerate sexual intercourse; a slight vaginal discharge; always complains of a burning pain low down in abdomen, and radiating down the thigh." Upon examination, the following is generally found: The uterus either retroverted or retroflexed, and held firmly down by bands of adhesions; ovaries and tubes not always distinguishable, owing to the extreme sensitiveness, but when felt, generally twice the normal size.

Now, let us see if we can explain the pathological condition of the organs of these women. As soon as inflammation reaches the Fallopian tubes, from whatever cause, the mucous membrane becomes much swollen; in fact, the whole tube becomes very much heavier, being engorged with blood, and sinks lower, folding itself over the ovary. Now, if the uterus is enlarged, which is almost sure to be the case if there is a specific endometritis, or an abortion, the fundus inclines backwards, the patient being in bed, generally on her back, during this acute stage. Just so soon as the inflammatory discharges from the Fallopian tubes reach the peritoneum through the ostium, local peritonitis is at once set up; lymph is thrown out, gluing the fimbriæ and other organs together. When the acute inflammation subsides, this lymph contracts, and bands of adhesions pin the uterus downward and backward in a most twisted and distorted condition. The Fallopian tubes being twisted also, a discharge accumulates, distends, and finally leaks out against the peritoneum, and another attack of peritonitis is

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started; more lymph exudes, and the broad ligaments are rolled in, like seared parchment. In this state it is frequent that both ends of the tube become firmly closed. Now, they will begin to develop a hydrosalpinx or pyosalpinx.

As to the treatment of salpingitis in these two hospitals. If they are in the acute stage when they come to the outdoor department, and there is room, they are taken in as hospital patients, and put immediately to bed. Anodynes are given—also tonics, if indicated—poultices are applied over the abdomen, and the bowels kept *well* open; a liquid diet is allowed, with the following local treatment: A tampon, saturated in pure glycerin or boro-glycerin, is applied to cervix. They are allowed to remain twenty-four hours—then removed. Then from one to two gallons hot water are thrown into vagina, and the tampon replaced. This treatment seems to act finely, after about ten days, in softening down the products of inflammation, and leaves the uterus more movable.

One can readily see how much damage could be done, when the pathological condition of these organs is not understood, by introducing a hard retroversion pessary to restore the uterus. My early experience with the pessary in cases somewhat like these (displacements with adhesions), was so unsatisfactory that I attempted to warn my brother physicians by reading a little paper before the Norfolk Medical Society last spring on this subject. My substitute for the pessary, where there is displacement with adhesions and very sensitive ovaries and tubes, as presented in that paper, is the following: I prepare four to six small tampons, about the size of the thumb, from the elastic fibre of lambs' wool; saturate these in glycerin, and carefully pack one at a time around the os; these are kept in position by one large tampon made of marine lint, which fits the vagina. Here the cotton tampon is used with the glycerin.

Now, as to the operative treatment for salpingitis. After the above local and constitutional treatment, many are so relieved that surgical interference is not required to enable

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them to attend to their domestic duties. When the above treatment does fail to relieve, as has been proven to be the case in fully 70 per cent. of all cases in these two hospitals, *then*, and not before, do I think the removal of the appendages by abdominal section justifiable. I have a poor opinion of the surgical knowledge and ability of a specialist who refuses to perform this operation because he claims that it mutilates and unsexes his patient, when, in these cases, they are already *forever* unsexed by a firmly adherent and closed ostium of the tube, or by a hydrosalpinx or a pyosalpinx, only waiting to rupture and pour its deadly septic fluid into the peritoneal cavity. Thus often ends the useful life of a once happy wife and mother, which ought to have been prolonged by the gynæcological surgeon.

But just here I desire to protest most emphatically against this wholesale oöphorectomy. I am thoroughly disgusted with the too frequent removal of the appendages by some of these young, single-barrel, squib-shooting, would-be surgeons. They will make an exploratory incision; and, finding little or nothing diseased in the appendages, some of them will claim that they should be removed because they are too large or too small, too hard or too soft. There seems to be an inordinate desire among them to make a report to the Gynæcological Society on their first ten or twenty-five oöphorectomies. No truly conscientious surgeon, feeling the responsibility as he should, could treat these poor hospital wretches as I have seen some treated.

I am satisfied there are more superior surgeons, and that one can learn more surgery in a short time in London than any other city in the world; yet there are some things one can *learn to avoid*, which will be of great benefit to him. I have watched numbers of these cases of salpingitis, from the day they entered as out-door patients, until they were either discharged (being relieved without the operation), or until after the operation, and then the pathological condition of the tubes proved the diagnosis correct, and no treatment short of removal could have ever relieved in such cases. I therefore feel confident that if a more careful study is made

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of the Fallopian tubes, a diseased condition will be found more frequent than was once suspected, and many obscure cases of local peritonitis, with incurable uterine displacements, will be explained, the only cure being surgical interference.

LIVIUS LANKFORD, M. D., *Norfolk, Va.*

London, Eng., December 18, 1890.

Proceedings of Societies, Boards, etc

CHATTANOOGA MEDICAL SOCIETY.

November, 1890.—**Discussion on Paper of Dr. Dunlap on Hysteria.** (See page 828.)

Dr. E. M. Eaton considered that the paper showed much study and thought. If it be true that the manifestations of hysteria are the results of lithæmic poisoning, why do we find so little of it among males, who are as much subject to lithæmia as females? It seems to him that hysteria predisposed to some irritability in the nervous system. The immediate cause may also be in the stomach or genital system. He considers the nervous prostration and neurasthenia the same as hysteria. It is one of the diseases which is very amenable to moral treatment.

Dr. J. E. Reeves thinks that excess of uric acid as a factor is quite probable. As a class, they are anæmic. Before an attack, the urine is scanty and acid in reaction. He would hesitate to declare uric acid a necessary factor—most cases are developed when the menstrual function is about to assert itself. In males, when the boy is just passing into manhood, he would hesitate to place any physiological structure as a cause.

Drs. G. W. Drake and H. Berlin look on the uric acid as a result rather than a cause. Dr. Drake thinks it is usually reflex, and often emotional. Dr. Berlin often prescribes acids in it.

In conclusion, Dr. Dunlap said that she didn't claim that uric acid was a universal cause of hysteria, but only one cause.

REPORT OF CASES.—**Laparotomy.**

Dr. W. C. Townes said that he was called to see a negress, 30 years of age, who had a retroverted uterus,

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with a tumor in her left side. She was relieved by morphia hypodermically and hot water, and in two days was out of bed. A few nights afterwards he was sent for, and found her suffering severely; temperature 101.5°, and pulse rapid and thready. Morphia again relieved. Next morning temperature was 102.2°, pulse rapid and weak. At 5 P. M, he saw her with Dr. J. T. McConnell. She had aborted in April; and menstruated in May and June; but not since. They diagnosticated ectopic pregnancy, and thought if same conditions existed next morning they would operate. Next morning the conditions were about the same, and, assisted by Drs. McConnell, Drake, Baxter, and Wise, he performed a laparotomy, and found the left ovary and left side of uterus and appendages firmly bound down. There was a cystic tumor in the broad ligament, which ruptured during the manipulation, and also two sub-peritoneal tumors, which they thought were fibroid. He broke up the adhesions, but as she had been under anæsthetics over an hour, and was weak, they did not remove the tumors, but washed out the cavity and closed it up. They used no drainage tube. She has now been up two weeks. Has no pain, and feels all right. There was a little pus cavity at lower end of wound, which is now closed.

Drs. B. B. Key thought the left ovary and the uterus should have been removed.

Dr. R. J. Trippe believes in an exploratory incision for diagnosis, but thinks the tumors should have been removed if possible. He asked the question—if simple adhesion of an ovary indicated its removal? For himself, he thought not.

Hydrosalpinx.

Dr. Trippe said he had a patient who, four years ago, had a miscarriage in her third month. There was no flow then for four months. Then there was a gush of water, about a teacupful; then the menstrual flow. The next month it was the same, and has continued ever since, but no bad results. His diagnosis is hydrosalpinx.

Dr. Baxter related a similar case, only there was first a flow of pus in his case, and then the menstrual flow.

You can easily add to your popularity and usefulness by following the instructions given by the McArthur Hypophosphite Co. on white card-board page of this issue.

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RICHMOND ACADEMY OF MEDICINE AND SURGERY.

Sept. 23*rd*, 1890.—Dr. W. W. Parker, President, in chair; Dr. James N. Ellis, Reporter.

Dr. John N. Upshur read a paper on

Placental Disease as a Cause of Premature Labor.

Reflections on this subject were suggested by a case to which he was called on August 5th, 1888. ———, æt. 29, blonde, health always robust, in fourth month of her third pregnancy. She had lost two children at the beginning of the seventh month. Inquiry failed to elicit a history of imprudence as a cause for the premature labor. The history of both former pregnancies was identical with the third. There was no swelling of hands or feet, no headache, no albuminuria, nor functional derangement of any organ. She was kept as quiet as possible, told to keep early hours, and given tincture chloride of iron and uterine sedatives. Soon after entering the sixth month, the movements of the child became each day more feeble and irregular, and she began to complain of a weight in the hypogastrium; motions of fœtus ceased and labor came on, which was easy and rapid. Fœtus cried feebly once or twice, and presented a swollen appearance, with more or less sclerotic condition of the skin; the cord was empty of blood; placenta firmly adherent, requiring nearly three-quarters of an hour to remove it; uterus contracted well and firmly. The placenta was *very soft*, pale and anæmic—so soft as to drop to pieces by its own weight, or a portion of it. Patient became again pregnant early in January, 1889. Reflecting on the two previous pregnancies and deliveries, he concluded that the cause of the death of the fœtus and premature delivery was a latent endometritis, stimulated to active progress by pregnancy, and the implantation and development of placenta—the inflammatory condition extending to the placenta, producing fatty change, cutting off the circulation of the fœtus, and consequent death so soon as the pathological change had progressed far enough. All history of syphilis was absolutely eliminated. On the occurrence of this fourth pregnancy he put the patient upon the most active alterative treatment of the bichloride of mercury, and chloride of gold and sodium, varying these alteratives, and keeping up the treatment for six months. Patient also drank Lithia water freely. The Doctor especially commended chloride of gold and sodium as an alterative. Its action, in doses of

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$\frac{1}{8}$ gr. to $\frac{1}{10}$ gr., in combination with one of the bitter tonics, is in many respects similar to that of the iodide of potassium. He believes it has a special influence in modifying inflammatory conditions of the endometrium. The patient progressed beyond the usual danger point, and was delivered safely at term; labor easy and rapid; child healthy, etc.; the placenta was also healthy.

Galabin speaks of inflammation of the decidua, which may arise from previous endometritis, and it may exist in the vera, or reflexa, or serotina. He says a study of inflammation in this situation is difficult, because the cell proliferation of the decidua is analogous to that which takes place in inflammatory process—it is the inflammatory process in the decidua serotina which chiefly affects the placenta. Symptoms of this trouble are soreness and tenderness over the uterus, but may be entirely absent. He says, also, that fatty degeneration may be partial, and then the fœtus may be born alive; but when extensive, it may directly kill the fœtus by cutting off the supply of blood. Parvin speaks of the distinction made by Dr. R. Barnes between fatty degeneration and fatty metamorphosis. The former begins in the living; the latter is found in the dead tissues. Cazeaux and Tarnier express doubt as to the ability to fix the symptomatology of this lesion, there being only an evidence of uterine congestion manifested in some cases by weight in the lower part of the abdomen, pain in loins and down the thighs. But these symptoms may be present when other placental lesions exist. There may be apoplexy, sclerosis, syphilitic disease, cancer, etc.

In reply to questions, Dr. Upshur said that Galabin's opinion is that a peculiar pinkish color of, and the presence of watery gummata in, the placenta are evidences of syphilitic disease of that organ. But he is satisfied of the absence of any syphilitic taint in the case reported.

Dr. Hugh M. Taylor was reminded of a patient who lost her first three children about the eighth month. In all of these pregnancies preventive treatment was adopted. Subsequently she had three children; but no preventive treatment was attempted, and all of the last three children were born alive, strong, and robust. He thinks we sometimes credit medicine with alterative influence which it does not deserve.

Dr. Thos. J. Moore doubts that conception can take place in a uterus which at the time of connection is the subject of corporeal endometritis. The leucorrhœa consequent

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upon such diseased condition effectually impairs the vitality of the spermatazoa, or by its flow washes the ovum from the uterine cavity. Where conception takes place in a healthy uterus, and endometritis subsequently occurs, the pathological changes consequent upon inflammation of the endometrium preclude the possibility of a continuation of pregnancy to term. Where the neck only is involved, conception and delivery at term may occur. Placental disease proper is frequently secondary. Various morbific conditions of the blood brings about abortion—such as the continued and the eruptive fevers and syphilis, especially secondary. In tertiary syphilis the patient frequently goes to term. Congestions, and other interferences with the circulation caused by flexions or versions produce fatty or amyloid degeneration, or general uterine contractions sufficient to detatch the membranes. Retroflexions are especially fruitful in these bad results.

Dr. Upshur does not think that the failure to abort, in the case of his patient, can be ascribed to coincidence, as suggested by Dr. Taylor. He referred to other cases of non-pregnant endometritis in his practice that were benefited by this treatment. A case yielding to iodide of potassium or bichloride of mercury does not necessarily imply syphilitic taint.

It is not common for conception to take place where there is an existing endometritis, especially of the cervix. But where you have latent endometritis before marriage, it may be developed by pregnancy. This patient had a dysmenorrhœa before marriage, but she was not treated for it.

REPORTS OF CASES—**Trismus Due to Imprudent Eating.**

Dr. Upshur was recently called to a lady with decided trismus, spasmodic contraction of both flexor and extensor muscles of hands and of lower extremities. Spasms were both violent and painful, lasting several minutes, and excited by draught or current of air. There was no wound to cause traumatic tetanus, nor had she taken strychnine. But she had eaten a few raw oysters the day before—the weather being warm. The convulsions were accompanied by choleraic symptoms, nausea, vomiting, and purging, but no collapse. Sulphate of morphia, hypodermically, and chloroform, by inhalation, and 20 gr. doses of bromide of potassium, every two hours, cured the patient.

Convulsions In a Child—Cause Obscure.

Dr. W. W. Parker reported a case of convulsions in a mulatto child whom he had relieved of an attack of nausea

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one month before by the use of carbolic acid. There were three or four convulsions daily, accompanied by a profuse flow of saliva. Suspecting worms, a vermifuge was administered, with negative result. Then he gave an emetic of sulphate of zinc without relief. The fourth day he was present during convulsions, which were confined to upper portion of the body and upper extremities. He thinks them due to ingestion of some insoluble substance. Was rubbed along spine with croton oil last night; better this morning.

Dr. M. D. Hoge, Jr., suggested that the convulsions might be due to preputial trouble.

Dr. Ed. T. Baker reported a

Case of Angina Pectoris,

Supposed to be caused by depressed fracture of skull years ago. White man, ætat, thirty; height, 6 feet, 2 inches; weight, 205 pounds; very muscular; occupation, striker in a blacksmith's shop. Prior to 1884 (when he received the injury to his head) he had not seen a day's sickness in his life. This injury left him with a depression on the left side of his head, on a level with the top of, and 1 inch posterior to the margin of ear, and 1¼ inches from tip of mastoid process. The depression measures 1 inch from upper to lower margin, and 1½ inches from anterior to posterior margins. He was confined to his bed for eight months after receipt of injury. After he was able to go about he had an attack of angina pectoris, and has had as many as three a week since that time. Sometimes he will not have one for a month, when they return with increased severity. He has been treated by a number of physicians, without relief. He has had more attacks, and they have been much more severe since he had "la grippe," last March. Heart sounds normal, but a little weaker than seemed in keeping with his fine physique and general strength. He has some dyspeptic symptoms, for which elixir lactopeptine was prescribed with benefit. The patient notices that when he gets very warm, and especially when he lowers his head in stooping, that it gives him pain in the back of his head just above the neck, and he will become unconscious unless the upright position is immediately resumed. Dr. Baker asked as to the advisable use of amyl nitrite for the anginal attacks. Is the angina due to the blow on the head, which may have fractured the inner table of the skull? and does irritation of that portion of brain so interfere with the action of pneumogastric nerve as to cause the heart trouble? Could trephining over the depressed bone relieve both the angina

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and head symptoms? The patient has been repeatedly told by physicians that the wound is too low down to be operated on. He is now taking sodium bromide, compound spirits ether, and aromatic spirits ammonia three times daily, and every two hours when threatened with attack. Dr. B. further said that the attacks were not more frequent in the recumbent position or at night. Mind clear. Thinks there is chronic congestion or inflammation about brain.

Dr. Parker thinks it a clear case for an operation.

Dr. Upshur saw a case that, in regard to the epilepsy, was similar to Dr. Baker's. The skin over the temple was cut by a falling timber; no ascertainable depression. Epileptic attacks, two or more daily, soon followed, dulling mental action. He was trephined, and upon the inner table or button of bone removed, there was a deposit of calculus, indicating that there had been fracture. No convulsions for weeks succeeded, but then he fell forward on his face, dead. Another case, an inmate of Central Lunatic Asylum, was struck on head with an axe, in 1862, and a piece of bone driven on the brain; became violently insane, but had no epileptic convulsions. He was trephined by Dr. Hunter McGuire, in 1869. He became rational upon recovery from operation, and took up the thread of events from the time he was struck, the intervening period being a blank. Subsequently died of cerebritis.

Dr. Hugh M. Taylor had, recently, a case somewhat similar to that cited by Dr. Baker. A railroad employee received an injury in same region of the head, remaining unconscious for thirty-six hours thereafter, when the mind cleared; no fracture of skull could be diagnosed. He suffered pain over the frontal region, left eye was blood-shot and protruded—evidently, some cerebral lesion. He continued this way for two or three weeks. In six weeks he began suffering from vertigo, increased pain, and depression of cerebral functions, amounting almost to coma. This was followed by discharge of pus from the ear and "Cheyne-Stokes" respiration. Diagnosed *abscess of brain*, probably due to depression. After consultation with Dr. C. W. P. Brock, he decided to trephine, but patient died the night before day selected for operation. He is satisfied he should have trephined.

Another Case of Abscess of the Brain

was reported by Dr. M. D. Hoge, Jr. Two weeks ago he saw, in consultation, a workman with a suspicious history of previous syphilis. He had been semi-comatose for two

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days. He had abscess of the skin on right frontal eminence; left leg paralyzed; bowels and bladder under complete control; respiration accelerated; pulse very quick and small; temperature, 104° F. On account of the feeble and uncertain condition of the heart, it was decided not to trephine. He was put upon drachm doses of potassium iodide every four hours. Sixteen hours later he died, paralysis having rapidly extended to all four extremities. The skull was trephined at the *post-mortem* at the point selected in discussing the operation the day before. The dura mater was pale and thickened; a smoothly-lined pus cavity was lying beneath—size and shape of guinea egg, occupying the right frontal lobe, and filled with thin, offensive fluid. There was no apparent communication between the external abscess and interior of cranium.

Dr. Hugh M. Taylor thinks the cerebral abscess may have been secondary, as sub-pericranial suppuration may find its way into the skull by extension along the venous sinuses leading into the cranium. A cerebral abscess not infrequently occurs as a result of phlebitis of the diploic veins.

Dr. W. W. Parker, in calling attention to the occurrence of *serious brain trouble without significant symptoms*, spoke of a patient who suffered for some days with frontal headache, and then fell suddenly dead. Post-mortem revealed an ounce of pus just back of the frontal sinus. Cerebral abscess is a frequent cause of death of children. He saw a child with bluish boils about the neck, which he opened. He was surprised to hear of death from convulsions the next day. Post-mortem showed extensive softening of the brain, which had evidently been diseased for some time. Another case was that of a ten-year-old boy, whose head was fractured by a wagon-wheel passing over it—death occurring several weeks subsequently. Mind was clear to within a few hours of death. Post-mortem showed disorganization of the whole top of brain.

The Doctor next spoke of several cases of

Atypical Typhoid Fever,

That have recently come under his observation—in which there was no heat of skin, no furred tongue, and no loss of appetite for fluids—attended with emaciation and prostration. One terminated in 15, another in 30 days. In treating typhoid fever, the points to be guarded are the brain, lungs, and bowels. Give an abundance of good milk and toddy. He gave a girl one quart of whiskey every day for six weeks. He thinks it greatly reduces temperature.

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For the diarrhœa he gives a mixture of turpentine, kino paregoric, and bismuth.

Dr. J. W. Henson reported a case of fever which he was unable to classify. There were at first griping pains over the abdomen, which was somewhat distended, but no pain or tenderness on pressure. The fever ran a regular course of morning remission and evening exacerbation. Morning temperature from 99°F. to 99 and a fraction; evening from 100°F. to 100+; occasionally, entire absence of fever for days. Pulse rapid and weak; suffers greatly at times from cardiac weakness and a sense of impending death, requiring active stimulation. Slight delirium at times. Suspected lung trouble, but physical examination gave no evidence thereof. Treated her at first by mercurial purgatives, followed by quinine, with a tonic of iron and arsenic, and dilute nitro-hydrochloric acid; milk diet, and later, whiskey in frequently repeated doses. She fattened while in bed. Suspecting local influence as a cause, he sent her to the country for the month of June. She menstruated regularly till the beginning of this sickness, when she missed one or two periods. No evidence of scrofula. Was first taken sick last December, and still has fever, but is otherwise apparently well.

Dr. W. S. Gordon had recently been consulted by a lady just from a malarial district where she had been nursing a typhoid patient. Had fever, and had been taking large doses of quinine. In each week she would have fever for four days, and be free from it the succeeding three. Examination of lungs disclosed slight sub-crepitant râles at the apex of the right lung; no cough, but emaciated; no history of previous pneumonia. Put her on creosote and whiskey; improvement. Sent her to country, and on return still has slight fever.

October 14th.—REPORTS OF CASES.—**Convulsions.**

Dr. W. W. Parker said the mulatto child, æt. 4, which he partially reported at the last meeting, is still suffering from convulsions, having had from 15 to 20 daily for the last 30 days. Mind not materially impaired; appetite good, but losing flesh; no history of worms; no abdominal tenderness; no local pain; bowels regular, but some straining to-day, and passage of mucus; no fever; eyes and pupils natural; skin pleasant; complete unconsciousness during convulsion. He is at a loss to account for these persistent convulsions; but he thinks them probably due to ingestion and retention

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in the alimentary canal of some insoluble substance. Dr. Isaiah H. White thinks that there is syphilis of the brain; but the parents are healthy, and there is no history of hereditary syphilis. Drs. M. D. Hoge, Jr., and Thos. J. Moore thought them due to the irritation of an elongated prepuce, and he was accordingly circumcised, but the convulsions have not abated since the operation. The speaker has never seen a case of convulsions that he could refer to preputial irritation. Nine times out of ten he thinks infantile convulsions due to improper food and irritation of bowels. If these convulsions were due to disease of brain, we would expect to find fever, irregularity of pupils, squint, etc. The patient was taking potassium bromide without apparent benefit.

As to Causes of Convulsions in Children,—Dr. Landon B. Edwards remarked that, judging from the expressions of eminent authorities at the recent session of the Medical Society of Virginia, there was too great a tendency to dispense with surgical procedures in certain cases in which they were, in the opinion of the speaker, of undoubted benefit. He referred to two cases, in his own practice, of convulsions in children which could not be traced to any other cause than preputial irritation. Prolonged treatment by usual remedies was tried in vain; but in each of the cases no convulsions whatsoever have occurred since the operation of circumcision was performed. In one case the cure has lasted for about eight years; in another for six. He would not be understood as affirming that more than a small percentage of convulsions in children are due to preputial irritation. But such cases are of sufficient frequency to require the physician to look for it as a probable cause. A perversion of almost any of the reflexes may cause convulsions. He has known a tack in the foot to produce epileptiform convulsions with no evidence whatsoever of tetanus. Penile calculi cause convulsions—and it is of daily occurrence to find them resulting from indigestion.

Dr. Thos. J. Moore saw the case with Dr. Parker during a convulsion, which appeared of a reflex or hysterical character. He called attention to the distinction between epileptiform convulsions and epilepsy, and quoted Reynolds as reporting a case in which there were 1,000 convulsions in 12 months, and yet the mental faculties were not materially impaired. Immunity as to intellectual effect was probably due to the fact that the base of the brain in the neighborhood of the fourth ventricle is the locality most seriously

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implicated. Epilepsy has an unmistakable tendency to impair the intellect, but many of the greatest minds have been subject to "falling sickness," and yet remained in comparative health, and with retention of mental faculties throughout life. Convulsions are due to a great variety of causes—traumatic, reflex, etc., some of which he enumerated.

October 28th.—The evening was taken up with a discussion of the subject of *House Sewerage and Ventilation*—Dr. M. D. Hoge, Jr., being the Leader. His remarks were extempore, and for his illustrations he used the blackboard so freely as to prevent a proper synopsis of his remarks. Col. Cutshaw, City Engineer, by invitation, also addressed the Academy, describing methods of house ventilation, sewerage, etc.

November 11th.—Dr. Landon B. Edwards, the Leader of the discussion on *Emergencies of Labor*, enumerated a great number of them and spoke of their recognition and how each is to be met in practice.

November 25th.—**Campho-Phenique for Local Use in Diphtheria, Etc**

A number of cases of diphtheria now prevalent in and about the city being reported, Dr. M. D. Hoge, Jr., incidentally remarked that he had used "Campho-Phenique" with great satisfaction in dissolving or removing the diphtheritic deposit from the mucous surface of the throats of some children he had attended—leaving clean and healthy-looking surfaces where the membrane had been. Campho-Phenique is simply an absolutely non-irritant true chemical combination of camphor and chlorophenic acid, which, when applied in its pure state, with a brush, to the surface, acts promptly as a local anæsthetic and prevents suppuration. His special attention was first called to this excellent combination for a great variety of purposes during the recent session of the Medical Society of Virginia. It is made by the Phenique Chemical Company of St. Louis, and he thinks it a very useful preparation for general practitioners and surgeons.

Beside the uses of Campho-Phenique to which Dr. Hoge had referred, Dr. L. B. Edwards said it was very useful in dentistry. In veterinary surgery, also, he had seen Dr. Harbaugh use it in operations about the hoof of the horse, leaving the foot, in a few minutes after operation, apparently painless, and the wounds perfectly non-suppurative.

Dentists use it to "kill the nerve" of the tooth, and then extract it without pain or risk of suppuration in the nerve

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cavity. He thought this special combination of camphor and chlorophenic acid had come to stay. Doctors ought to keep it in their offices for numerous purposes.

Analyses, Selections, etc.

Is Buffalo Lithia Water a Solvent for Stone in the Bladder?—A Case in the Affirmative.

This question is one of daily growing practical interest to every practitioner. Dr. Henry M. Wilson, of Baltimore, an ex-President of the Medico-Chirurgical Faculty of Maryland, was perhaps the first of authorities to call attention to the value of this Water for urinary calculi. Prof. James B. McCaw, the late Professor L. S. Joynes, and others, of Richmond, Va., had previously noted its value in the relief of uric acid diathesis, and thus most probably preventing the formation of gravel in the kidneys or bladder. But it seems that Dr. David E. Smith, of Bronxville, N. Y., was the first to publish (*Med. Brief*, May, 1881,) a positive report of a case of solution or disintegration of vesical calculus as the result of the use of this now famous Virginia Springs Water. Cases have been reported likewise by the late Dr. S. A. Geoghegan, of Clarksville, Va.; Dr. James Shelton, residing near the Springs; Dr. John C. Coleman, Surgeon U. S. Navy (retired); Dr. B. S. Hardy, of Hookerton, N. C.; Dr. R. D. Baskervill, of Swepson, Va.; Dr. Hasford Walker, of Georgetown, S. C.; Dr. J. D. Eggleston, of Worsham, Va.; Dr. G. Halsted Boyland, late Professor of Surgery in Baltimore Medical College; Dr. B. J. Wristling, of Middletown, Pa., and by hosts of other able practitioners and worthy witnesses—showing that something more than a *post hoc* theory has to be advanced to explain the numerous instances of claims of cure of renal and vesical carculi by the prolonged use of Buffalo Lithia Water. Dr. E. C. Laird published (*Maryland Med. Jour.*, Nov. 17, 1888,) a remarkable case in which a patient passed about an ounce to an ounce and a half of "calculous matter" (uric acid), which had been sufficiently dissolved by this water to be washed out with the discharges of urine. Dr. J. Buxton Williams, of Oxford, N. C., recently published (see November number, 1890, of this journal) an even more striking case, going far to sustain the affirmative of the question heading this Analysis.

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Dr. John Herbert Claiborne, of Petersburg, Va., whose eminence is measurably indicated by the distinctions he has received in the Medical Society of Virginia and other like organizations, reported through this journal (December, 1889,) a case as positively confirmatory of the suggestion. This brought out in the succeeding issue (January, 1890,) the report of a case by Dr. F. S. Hope, of Portsmouth, Va., just as strongly illustrative. Dr. Wm. C. Wile, of Danbury, Conn., a recent Vice-President of the American Medical Association, reported a case (*N. E. Med. Monthly*, February, 1890,) in which the effect of the use of Buffalo Lithia Water—to quote his words—"was simply marvelous. The quantity of debris that came from the patient's bladder and kidneys was beyond all belief;" and the patient got well, and is well. He also reports his own case, in which the solvent power of this Water over urinary concretions in the kidneys and bladder was just as marked. In the same journal (July, 1890,) Dr. C. H. S. Davis, of Meriden, Conn., reports a case of stone in the bladder of long standing, in which "disintegration to a certain extent took place, and large quantities of stone were passed"—as much as a teaspoonful for several days in succession—and in the course of a few weeks "he was relieved of his trouble," solely as the result of the prolonged use of Buffalo Lithia Water, according to Dr. Davis' own opinion. The Philadelphia *Medical News*, of November 9th, 1890, contains a report of "Two cases of vesical calculous relieved by Buffalo Lithia Water," by Dr. Samuel L. Hannon, of Washington, D. C. In the *New York Medical Journal* of a recent date, also, a case has been published attesting the solvent or disintegrating action of this water sufficient to cause calculi to be dissolved and washed out of the bladder by the flow of urine. We find in the *New England Medical Monthly*, November, 1890, still another case, reported by Dr. G. F. Pierce, of Danbury, Conn., which so apparently and strikingly affirms the answer to the question in the caption of these remarks, and is so confirmatory of the reports of others to which we have just referred, that we copy the report entire, and have secured the loan of the woodcuts illustrating the size and shape of some of the largest calculi that came away as the accredited consequence of the prolonged drinking of this Virginia Springs Water alone.

Dr. Pierce says: "I must confess that I was skeptical as to the value of this mineral water as a solvent of stone anywhere, either in the bladder or kidneys; but after seeing

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some of the statements recently published in the columns of your valued paper, I felt that in the future, if I did not use it, I would not be doing justice to my patients. I little thought, at the time I came to this conclusion, that I should so soon have such a remarkable example of its solvent powers.

"I tried it on a case of renal colic, which nothing seemed to relieve permanently, and which, upon the administration of Buffalo Lithia Water, yielded like magic. But this case was but child's play beside the one which I will now relate. Before I do so, however, I wish to state that when the patient came to me I had no idea of the extent of his trouble, and I now can see where obscure symptoms were not carefully analyzed and were overlooked entirely by other doctors, whom he had appealed to for relief.

"Mr. S., American, 47 years old. On being questioned, says that he has never, to his knowledge, had nephritic colic in his life. During the past twenty years, once or twice during each year, he has had an attack which has been diagnosed as peritonitis, typhlitis, colic, inflammation of the bladder, and various other diseases. He describes his symptoms as follows: He would wake up in the morning as well as he ever was; in fact for a few days before the attack he would feel in better spirits than usual, and would seem to be more buoyant. Some time during the day, maybe during the morning, during the afternoon, and sometimes during the evening, he has commenced suddenly to have a severe pressing sensation in the bowels. This sensation was accompanied by an intense and almost uncontrollable desire to make water. He has been to the doctor many times, and made him pass a catheter into the bladder, in order that he might have ocular demonstration that there was no water in it. This pressure of the bowels was accompanied by a desire to evacuate them, and though he has taken many injections, he has been unable to get anything from them. These three symptoms were accompanied with great restlessness, and sometimes ushered in by a chill and high fever, and at other times by no accompanying symptoms whatever. During the time of his distress he was not able to sit or lie down at all, but would walk about, trying in vain every few moments to relieve his bladder and bowels. After having this suffering for from one to six hours, his relief would be as sudden as its onslaught, and complete until another attack. His pain in the bladder was always on one side of the neck. These phenomena had existed,

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as I said before, for full twenty years, and he had had a variety of treatments prescribed for him by as many doctors; but with certain regularity he had continued to have his attacks.

"About two years ago, after experiencing one of his most severe attacks, he noticed that the irritation on the right side of the bladder continued and was more and more persistent, and gradually increased until his sufferings became very great. He was supposed to have had at this time, as was so diagnosed, cystitis and enlarged prostate.

"Four months ago he consulted with me, and I advised that his bladder be explored for a foreign body, which I was sure was present. On attempting to pass the sound into the urethra, I found it so sensitive that it was impossible to make any progress without the use of an anæsthetic, and chloroform was accordingly administered, preceded by a good big dose of whiskey, my invariable custom when administering this anæsthetic. On entering the bladder, I encountered a large mass, which from the characteristic click, I decided was a stone. It was something immense, and larger than anything that I had ever known of or heard about. The day after the exploration, I had a long talk with him, telling him that he had a large stone, and advising him to have an operation performed for its removal, as I did not believe that anything else would do him any good. He was very despondent, and refused to talk about an operation at present, asking me to give him something for temporary relief. I prescribed Buffalo Lithia Water, a goblet four times a day, and a good, liberal diet, together with tonics. In three days time he called me to see him, and showing me the vessel which he had used during the night, asked me if the debris which I saw was not disintegrated stone. I was surprised to see the quantity of brick-dust, or rather, iron-rust looking deposit, which was present. This material kept coming away, and sometimes large particles came from time to time. All of the larger ones were saved, and the engraving enclosed shows some of the largest. After all were passed, which took three and one-half months, the large particles which were saved weighed two ounces and twenty-seven grains. What passed besides this could not be estimated. Chemical examination showed it to be entirely of the triple phosphate variety. What this man must have suffered, I will leave you to imagine; but he is now well, and to-day I passed a sound in his bladder, without the slightest difficulty, and found it entirely free. The

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Buffalo Lithia Water in this case certainly is entitled to the credit of a cure, and of saving this man from a perilous operation."

With such positive and direct testimony as we have taken the pains to refer to so fully—eliminating from the evidence all hearsay statements, and excluding from the witness-stand all except those who are confessedly trustworthy and ably competent to observe—is it reasonable to deny the solvent or disintegrative properties of Buffalo Lithia Water in certain forms of renal and vesical calculi, or to refuse it as prominent a place on the therapeutic roll as is given to many of the European waters that lay claim to distinctive virtues? We are free to confess that as yet we do not satis-

factorily enough understand its *modus operandi* to undertake the statement of a theory in explanation of its wonderful effects. For the present, we are willing to accept the opinion of Dr. Hunter McGuire as to *nerve-tonic* properties of the water, based on the fact that it is a powerful aid to digestion. This would be in keeping with the statements of Dr. E. L. Keyes, Professor of Genito-Urinary Diseases in

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Bellevue Hospital Medical College, of New York, tha- "Phosphatic urine depends usually upon nervous exhaust tion, and is usually associated with weak digestion."

Notes upon Somnal, the New Hypnotic.

Dr. Frank Woodbury, Professor of Clinical Medicine, Medico-Chirurgical College, etc., says (*Dietetic Gazette*, July, 1890), that last fall Radlaur, of Berlin, brought to notice (*Zeitschr. des Apoth. Vereins*, November, 1889,) a new compound which he named somnal, in acknowledgment of remarkable hypnotic properties which it possesses. It is formed by the union of chloral, alcohol, and urethane (*Jour. de Med.*, October 20, 1889), but is not a simple mixture of them. It differs from chloral-urethane by the addition of C_2H_4, its formula being $C_7H_{12}Cl_3O_3N$. The method of manufacture is by direct combination of chloral alcoholate and urethane in a vacuum apparatus, according to its discoverer, who states (*Phar. Jour. and Trans.*, November, 1889) that its composition might be graphically represented thus:

$$\begin{array}{l} \quad\quad\quad OC_2H_5 \\ CCl_3—C—H \\ \quad\quad\quad NHCOOC_2H_5. \end{array}$$

Specimens of this new hypnotic, through the courtesy of Messrs. Eisner & Mendelson Co., having been placed in his hands for examination and trial, Dr. Woodbury briefly communicates some of the results obtained:

Physical Characters.—Somnal is a colorless liquid, resembling chloroform in appearance and behavior when added to cold water, in which it forms globules and refuses to mix or dissolve. When shaken with water, the mixture is milky, but quickly separates. It is soluble in hot water and alcoholic solutions, and dissolves resinous substances and fats. The odor is faint, not very penetrating or disagreeable, and resembles that of the spirits of nitrus ether, or recrystallized chloral. The taste is very pungent, and for administration it needs free dilution. It may be given with whiskey, or solution of tincture of zingiber or syrup of licorice. Somnal is inflammable, burning with an alcoholic flame; it does not evaporate quickly, and leaves a greasy stain upon blotting-paper. Specific gravity greater than water; reddens litmus paper slightly.

In physiological action, it resembles chloral in quickness of effect and naturalness of the sleep produced. No marked depressing influence was exerted upon the pulse or respiration rate, though the breathing became slower and the

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pulse slower and fuller, as in natural repose. No disagreeable after-effects. The head was clear; stomach unaffected; patients generally had appetite for breakfast. No constipating effect. The kidneys acted rather more freely than usual. Dr. Ernest Laplace, to whom Dr. Woodbury gave some of the drug for trial, writes as follows:

"I have given somnal a fair trial upon six patients at the Philadelphia Hospital. In no case were the patients told what was given them; so outside of the bare possibility of the patient's falling asleep through natural causes, somnolence was brought on by the drug. It was administered, in a solution of tinc. zingiberis, in half-teaspoonful doses, and was found palatable.

"Administered at 4 P. M., at a moment when patients were not generally asleep, in four cases sleep came on within half an hour, which lasted from five to eight hours; the two other cases showed no effect from the drug. It is their habit to get at least gr. ¼ of morphine sulph. to put them asleep every night, as they are sufferers from intractable malignant growth. In no case was there any noticeable after-effect.

"I have not formed any opinion upon the length of time that the drug could be used daily upon the same patient.

"To this I might add, that no depression of the normal temperature was noticed in any case in my hands, and thus far I have not used it in prexia."

Therapeutic Application.—The effects of somnal in producing natural sleep suggested its use in *insomnia.* Dr. Woodbury first used it in a case of acute alcoholism, that had been under treatment for a fortnight where he had a free supply of liquor, and he came out rather worse than he went in. He was 39 years of age, very tremulous, and could not sleep; or if he dozed off, would immediately wake up. He was given, about 3 P. M., thirty minims of somnal (a drachm of a mixture of equal parts of somnal and whiskey), well diluted; the Doctor went into an adjoining room. Upon returning, he was surprised to find him fast asleep, although he had not been away from him more than fifteen minutes. He slept for four hours, and then took something to eat. At 10 P. M. he had another dose, and slept until 4 the next morning. He awoke only once during the night, and insisted upon another dose; and immediately after taking it he fell asleep again. The next night he was given a double dose at 10 P. M., and he slept all night without waking. No bad effects were ob-

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served. The somnal was given for four nights, when he was so nearly well that it was suspended, as he had had good natural sleep at night and seemed quite restored. Alcohol was positively prohibited, the only substitute allowed being Elixir of Coca and Camellia (P. D. & Co.), in tablespoonful doses, in which there was a small amount of alcohol, but quite infinitesimal when compared with what he had been using. Somnal, therefore, acts well as a hypnotic in *acute alcoholism* as a tranquilizer and hypnotic.

In a case of *neuralgia of the bowels* (visceral neurosis of Allbutt), where the patient had a sleepless night, a dose of twenty minims relieved nausea and pain, and the patient fell asleep.

In syphilitic headache and insomnia, somnal in moderate doses failed to produce sleep, which was afterwards secured by potassium bromide and iodide, and antipyrin.

In cases of *insomnia, fretfulness, and restlessness in young children*, somnal with mint-water and syrup offers better results than opiates, and is much safer. The same remark probably applies to the use of somnal in acute pneumonia, but I have not confirmed this yet by actual trial.

Without further detail, it may be stated that somnal acts as a hypnotic; but instead of depressing the system as chloral does, it slightly stimulates the gastric mucous membrane, relieves nausea and pain, improves the appetite, increases secretion (probably), and does not cause constipation. The circulation, respiration, and temperature are not notably depressed after its administration. No disagreeable after-effects have been observed. As it is rapidly eliminated from the body, it may be administered each night for a number of days without any obvious ill-effects. It acts very much like chloral, but is more pleasant to take, and not so depressing upon the nervous system and circulation.

Mosquera's Food Products—Beef Meal, Beef Cacao.

Messrs. Parke, Davis & Co., whose reputation for original work has long been established, announce that, after thorough study of the various food products, they can now supply preparations which will fulfill all the requirements for therapeutic and dietetic use.

Physicians very frequently meet with cases where nutrition is the only agent they can count upon. Heretofore, they have had at their disposal a great variety of preparations of meat. These are divisible into four great classes:

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2, Extracts of meat, prepared after the formula of Liebig; 2, meat juices; 3, ordinary powdered meats; and 4, meat peptones.

The ordinary process of preparing meat extracts involves a simple extraction of meat with either warm or cold water, and an evaporation of the resulting solution, continued until reduced to a thick liquid or paste. This extract contains the inorganic soluble salts of the meat and some stimulating organic matter, but none of the nourishing, flesh-forming, albuminous substance.

The meat juices are usually cold extractions of meat, and contain some soluble albumen, which coagulates out upon boiling, and cannot amount to much more than 4 or 5 per cent. Such meat juices, therefore, possess but little nutritive value.

Powdered meats, as heretofore known, are nothing more nor less than the residue left after extracting all the soluble constituents. Dujardin-Beaumetz and several therapeutists, after careful experiments, concluded that this powder possessed a high nutritive value, and could be employed to advantage in the treatment of certain diseases (consumption and dyspepsia especially). That they are concentrated nutrients, is a fact; for beef, in its natural condition, contains 75 per cent. of moisture, all of which is driven off in the preparation of the powder. But these powders are liable to become rancid, or else have been deprived of the inorganic salts peculiar to meat in its natural state, and which salts are quite essential in the digestive process. Moreover, powdered beef requires just as much effort to digest it, as does ordinary beef, and for this reason cannot be regarded as a proper food for patients suffering with derangement or weakness of the digestive organs.

Another group of meat preparations embraces the meat peptones. Peptone is the ultimate product of digestion, and the form in which the albuminous or proteid matter is assimilated by the system. These peptones are invariably the product of the artificial digestion of meat by animal pepsin and hydrochloric acid, or, although to a smaller extent, by a digestive ferment of the carica papaya. These are the only preparations really valuable as nutrients. But the physician meets here with another difficulty, in many cases insurmountable: The taste of the peptones is, more or less, bitter and objectionable to the palate; so that patients either absolutely refuse to take them, or take them only with the greatest repugnance. Besides this, their price is

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comparatively so high that frequently the physician is obliged to abstain from prescribing them.

Messrs. Parke, Davis & Co. claim that all the difficulties heretofore encountered by the profession in the use of predigested foods, have been overcome by the new food products of the Mosquera-Julia Food Company. This Mosquera's Beef Meal contains all the stimulating principles of the extracts of meat, and, in addition, the nutritive principles which the extracts lack; all the albumen of meat juices without their weakness; all the strength of powdered meats without their rancidity and insolubility; all the peptones of the peptonized meats without their bitterness.

The claims made on behalf of Mosquera's Beef Meal, therefore, cannot be over-estimated; they are based on its analysis and properties, and may be condensed as follows: It is a perfectly pure predigested meat, containing all the nutritious constituents of good lean beef, half of which are in soluble form, ready for immediate assimilation, and the other half easily digestible by the gastric and pancreatic juices. Therefore, the entire preparation, being practically dry, is composed of nutritive matter, containing about 40 per cent. of soluble peptone and albumose. It represents, in actual nutritive value, at least six times its weight of good lean beef. It is perfectly palatable, and will be tolerated with ease by the most delicate stomach. It admits of being administered in a variety of forms, thus avoiding monotony in the food. It is the most nutritious as well as the most economical concentrated food.

Mosquera's Beef Meal is not a ready prepared dish, but rather a raw preduct. It is nothing more than a concentrated beef, converted by artificial digestion into a form which renders it assimilable upon mere contact with the mucous membrane of the alimentary canal. It, therefore, must be treated by nurses or cooks with the same regard to flavor and taste they would exhibit in the preparation of beef-steak, Ordinary beef, if simply boiled in water, would neither yield a palatable bouillon, nor be eaten by itself; salt or other condiments must be added to it. So also, in the use of this beef meal, ingenuity has necessarily to be exercised in its preparation. No matter how palatable or nutritious a food may be, unless presented in a variety of forms it will inevitably become monotonous and even repulsive—this being especially true with patients whose digestive organs are in a weak and debilitated condition. If, therefore, a patient is to take the beef meal for a length

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of time, it must be administered in a variety of forms to insure the benefit of all its nutritious value. It may be given in different soups, condimented to suit the taste of the patient, as also mixed with biscuit powder or oatmeal porridge and milk and sugar. Again, it may be mixed with chocolate, which makes a delicious beverage, or given in the form of a sandwich, and finally as a plain beef tea, simply dissolving it in hot water, adding salt.

As to Mosquera's Beef Cacao, its composition, properties, etc., are definitely stated in the advertisement on the last cover page of this issue.

Book Notices.

Essentials of Practice of Medicine, Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By HENRY MORRIS, M. D., Visiting Physician to St. Joseph's Hospital, etc. *With a Very Complete Appendix on the Examination of Urine.* By LAWRENCE WOLFF, M. D.. Demonstrator of Chemistry, Jefferson Medical College. Philadelphia: W. B. Saunders. 1990. Cloth. Demi 8vo. Pages 368-66. Price, $2.00. (From Publisher.)

As the total number of pages given in the title—434—would indicate, this issue of Nos. 8 and 9 of "Saunder's Question Compends" is a double number, and is by two able authors on two different subjects. It is wonderful how so comprehensive a book has been made in such short space. But it seems that the authors have covered all the important points essential to the student or physician preparing for review or for examination; and to such parties this book comes as exactly filling the want of the times, when colleges are demanding more and more rigid examinations for graduation, and State Medical Examining Boards are springing up in every State, requiring examinations before it is possible to secure license to practice. A good index to each part of the work adds greatly to its value. We would advise every Examiner, and every one about to go before such Examiner, to possess himself of the entire series of "Saunders' Quiz Compends," in order that he may readily review his knowledge of each branch of medicine in the most concise, yet satisfactory manner possible.

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Manual of the Practice of Medicine. By FREDERICK TAYLOR, M. D., F. R. C. P., Physician to, and Lecturer on Medicine, at Guy's Hospital, etc. With Illustrations. Philadelphia: P. Blakiston, Son & Co. 1890. 8vo. Pp. 877. Cloth. Price, $4. (For sale by West, Johnston & Co., Richmond.)

This is almost distinctively an English or European book —very little of American original practice occurring in it. Turning, for instance, to the Section on Vertigo, the reader would become impressed with the idea that labyrinthine disease is about the most common cause of the disorder; whereas American practitioners—at least those in this section—have become satisfied that it is most commonly due to other causes, and are constantly curing cases by resort to those remedies which improve digestion, remove renal complications, etc.—without even having occasion to suspect aural disease. And yet it would be unjust to leave such a note disconnected from the statement that the work is based upon the best of the latest foreign authorities, of which, indeed, it is, in great part, an excellent compilation. As to the major diseases, regarding which no material differences are known to exist in different countries, such as epilepsy, pneumonia, Bright's disease, etc., the author deserves commendation for the most satisfactory description of symptoms, for the clear distinctions between diseases leading to accurate diagnosis, for the correct statements of prognosis, and for the excellent directions as to treatment. It is a valuable practical work for practitioners and students.

Medical Diagnosis, with Special Reference to Practical Medicine. By J. M. DA COSTA, M. D., LL. D., Professor of Practice of Medicine, and of Clinical Medicine, in Jefferson Medical College, etc. Illustrated with Engravings on Wood. Seventh Edition. Revised. Philadelphia: J. B. Lippincott Company. 1890. Cloth. 8vo. Pp. 995. Price, $6. (For sale by West, Johnston & Co., Richmond.)

There ought to be no practitioner, in the United States, at least, without a copy of this book. In many a difficult case has it served the purpose of a faithful guide to diagnosis. It is almost of daily use to the busy physician. Each edition has been an improvement on the already good former one. It may be well to call attention to the typographical error on page 865, where the name of the late eminent Southern author on fevers, Dr. O. F. Manson, is spelled Morson; yet very few, if any other, such errors have been noticed. An ample index facilitates reference to signs, symptoms and diseases.

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Dictionary of Practical Medicine by Various Writers. Edited by JAMES KINGSTON FOWLER, M. A., M. D., F. R, C. P., Senior Assistant Physician to the Middlesex Hospital, and Lecturer on Pathological Anatomy in the Medical School, etc. Philadelphia: P. Blackiston, Son & Co. 1890. Cloth. 8vo. Pp. 942. (For sale by West, Johnston & Co., Richmond.)

Over forty prominent English contributors have aided the Editor in making this a very thorough dictionary of Practice of Medicine, including Diseases of Women—excluding all subjects properly belonging to surgery, etc. Descriptions are alphabetically arranged under such leading words where it is most probable they would be looked for. But to make ready reference sure, a general index of some sixteen double-column pages is introduced. Such a work as this is useful to every practitioner, and should be kept by him always within convenient reach in his office. Descriptions are full enough to give the salient points which aid in diagnosing a disease, learning its course, prognosis, pathology, etiology, etc., and especially is it useful in matters pertaining to treatment—even the exact doses and combinations of various drugs suited to the disease being given.

Manual of Modern Surgery. By JOHN B. ROBERTS, A. M., M. D., Professor of Surgery Woman's Medical College of Pennsylvania; Professor of Anatomy and Surgery in Philadelphia Polyclinic, etc. With 501 Illustrations. Philadelphia: Lea Brothers & Co. 1890. Leather, $5.50; Cloth, $4.50. 8vo. Pp. 800. (From Publishers.)

This is the surgical text-book long wanted, for it reaches most nearly to the standard of the authoritative. It is an exposition of the *accepted* doctrines and *approved* operative procedures of the present time. We are told that the author has rigidly excluded from this text theoretical and historical questions, traditional views and operations, and innovations of undetermined value, which leave it for the student or practitioner to feel that if the directions given in this work are followed out he will have the weight of eminent authority on his side And yet we might wish that some of the now well-established practices of able operators and successful surgeons had been referred to, since some of them point the way to even greater successes by simpler methods than the older usages. For instance, McGuire's supra-pubic cystotomy for certain bladder and prostatic troubles is sufficiently well-established in professional confidence to entitle it to a reference somewhere in the Sections referring to the

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surgery of these parts. The author's descriptions of details of operations are remarkable for their clearness, combined with precision and conciseness.

Post-Mortems. What to Look for and How to Make Them. By A. H. NEWTH, London. Rdited with Numerous Notes and Additions by F. W. OWEN, M. D., formerly Demonstrator of Anatomy Detroit College of Medicine. Cloth. 12mo. Post-paid. $1.00. The Illustrated Medical Journal Company, Publishers, Detroit, Mich.

This book is replete with information for every person interested in necroscopy. It is not designed to take the place of large works upon pathology, but to present, in a tabulated way, with quick side-head references, all important conditions of an organ met with in post-mortems. It is valuable to the country physician, who makes autopsies infrequently, as also to the medical student who is occasionally in the "dead-house." It is the only brief work of the kind now at command. The American Editor has added numerous important notes to the English text. Besides the ordinary conditions met with after death, chapters are devoted to post-mortem appearances in those poisoned, drowned, hanged, or cases of infanticide. Full directions are also given for exposing the organs advantageously for their complete examination.

Bacteriological Technology for Physicians. With 72 Figures in the Text. By DR. C. J. SALOMONSEN Authorized Translation from Second Revised Danish by WILLIAM TRELEASE. New York: Wm. Wood & Co. 1890. Cloth. 8vo. Pp. 162. (From Publishers.)

Whether the physician of to-day proposes to be a bacteriological student or not, he is nevertheless presumed to possess information enough about bacteriology to understand its technology, and to state, in general terms at least, something of the methods and results of those who are just now throwing a flood of light upon pathology, etiology, and even upon the treatment of some diseases. The book under notice is not an exhaustive treatise on the subject; but it does state most of the practical results thus far obtained by bacteriologists, and it further describes the simplest and most easily managed apparatus and methods, so that the equipment of a home laboratory need not be very expensive. A better index would have materially assisted the reader to refer more promptly to specific details or descriptions given throughout this most valuable work.

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Editorial.

Dr. Vtrginia M. Davis,

Of Memphis, Tenn., is about to locate in Asheville, N. C. She is a graduate of the Class of 1866 from the Women's Medical College of the New York Infirmary. She served a year as House Physician in the New York Infirmary, and three subsequent years as Resident Physician in the Infant Asylum at 61st street, New York city, where she had ample opportunities for perfecting herself especially in obstetric, gynecic and pediatric practice. To give an idea of the extent of her opportunities, the last *annual* report of her hospital showed that she had charge of 220 labor cases without a fatality; and of 362 children's cases she lost only 19 during the year. Her consulting staff in New York, by whom she stands well-recommended, was composed of such eminent praciitioners as Drs. J. Lewis Smith, Stephen Smith, Geo. B. Fowler, H. J. Garrigues, George T. Harrison, H. C. Coe, O. D. Pomeroy, C. L. Dana, C. D. Rice, H. G. Piffard, etc. With such a record as to her professional ability, and established as she is in social relationships by family name, etc., we trust that she will be well received by the profession of North Carolina, and that she will reach that position in professional renown to which her attainments so evidently entitle her.

Seventh International Congress of Hygiene and Demography.

This Congress will be held in London during the week beginning August 10, 1891. The Governments of all countries and municipalities, and all Public Health Authorities, Universities, Colleges, and Societies, occupied in the study of the sciences more or less immediately connected with Hygiene, are invited to co-operate and appoint delegates to represent them. The Prince of Wales will preside. Sir Douglas Galton is Chairman of the Committee of Organization, and Prof. W. H. Corfield and Mr. Shirley F. Murphy are Honorary Secretaries. An exhibition of articles of hygeinic interest will be held in connection with the Congress. The last of these Congresses was held in Vienna in 1887, and was attended by over 2,000 persons, and it is expected that the London meeting will be one of great magnitude and importance. Dr. John S. Billings, of Washington, D. C.; represents the International Permanent Committee in the United States.

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Mattison Prize Subject—$400.—Opium Addiction as Related to Renal Disease.

Dr. J. B. Mattison, of Brooklyn, N. Y., offers a Prize of $400 for the best paper on this subject, based on the following queries: "Will the habitual use of opium, in any form, produce organic renal disease? If so, what lesion is most likely? What is the rationale?" The contest is open to either sex, and any school or language. All papers are to be in possession of the Chairman of the Award Committee (Dr. Alfred L. Loomis, New York, N. Y.,) on or before January 1st, 1893. Other members of the Committee are: Drs. H. F. Formad, of Philadelphia, Pa.; Ezra H. Wilson, of Brooklyn, N. Y.; Geo. F. Shrady, of New York, N. Y.; and Jos. H. Raymond, of Brooklyn, N. Y. The Prize paper is to belong to the American Association for the Cure of Inebriety.

New Members of the State Medical Examining Board of Virginia.

The Executive Committee of the Medical Society of Virginia (Dr. Hunter McGuire, Chairman,) during November, 1890, nominated, for commissions by the Governor of Virginia, Drs. Jacob Michaux, of Richmond, Va., and John W. Dillard, of Lynchburg, Va., as members from the State-at-large of the State Medical Examining Board of Virginia, to fill vacancies occasioned by the resignations and removals from the State of Drs. L. Ashton and I. S. Stone. The gentlemen nominated have been duly commissioned. They are to succeed two gentlemen who were eminent in the profession of their State, and whose good work while members of the Board added much to make the Board the distinguished body that it is. We congratulate the Board that the successors now elected are members of it, for they will likewise prove themselves able, willing workers, and conservative and excellent Examiners.

State Medical Examining Board for West Virginia

An earnest effort is being made by the good doctors of West Virginia to have a State Medical Examining Board established in their State, such as the one in Virginia. Drs. J. W. de Veber, of Ronceverte, and B. F. Jones, of Pickaway, Monroe county, W. Va., are leading off in the matter, and we wish them success. The rapid improvement in the rank and file of the recent members of the profession, as compared to what they were prior to 1885, when the Virgi-

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nia law went into effect, is too apparent to one familiar with the past and present to need another argument in favor of a State Board of Medical Examiners for every State—entirely disconnected from the Colleges, and without political bearing or gubernatorial personal favoritisms. North Carolina has an experience similar to that of Virginia, as above referred to; and so has Alabama.

The Weekly Medical Review Pocket Reference Book and Visiting List—Perpetual.

Published by Messrs. J. H. Chambers & Co., St. Louis, Mo., is a neat, compact, well-arranged, useful pocket visiting list, good for any year. Beside the usual blank leaves for 25 patients weekly, it contains blank memoranda for nurses, addresses, clinical records, obstetric records; etc., of printed matter, it has a calendar for 1891–92, table to predict date of confinement; artificial respiration rules; examination of urine, poisons, and antidotes; tables of doses; diet for diabetics; diagnosis of eruptive fevers; comparison of thermometric scales; statement of decimal or metric system of weights, etc. Mailed by Publishers on receipt of $1.

The Patient's Record for the Use of Physicians and Nurses,

Compiled by Agnes S. Brennan, and published by G. P. Putnam's Sons, of New York, N. Y., is a blank book of about 100 pages, ruled up and down the page, with spaces below the line for the name of the patient, etc., for date, time of examination, temperature, pulse, respiration, medicines, nourishment, stimulants prescribed and given, with spaces also for notes about the urine and any other remarks that may be deemed proper. Such a record is of great service to all parties interested in a given case. Fly slips are attached to every page, on which to take down the Doctor's orders, etc. Appended to the Record are a number of neatly ruled and lettered blank temperature, pulse and respiration charts. The price of the book is $2.00, and is for sale by Messrs. West, Johnston & Co., Richmond, Va. Once used, we are confident the book will become generally adopted for protracted cases of ten days or more of sickness.

Dr. Carl Weidner, of Louisville, Ky.,

Demonstrator of Bacteriology and Microscopy in the Kentucky School of Medicine, has been sent to Berlin by Dr. J. B. Marvin, of Louisville, to take a course of instruction in Bacteriology under Prof. Koch, and to investigate practically the recent reputed cure of consumption, etc.

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The Atmospheric Tractor a Help in Labor.

The advertisement of the "Atmospheric Tractor," beginning in this number, calls our attention to a new, cheap, and what appears to be a safe and helpful instrument in labor cases after the head of the fœtus has become properly flexed and yet is delayed in birth. A full description of the "Tractor" and how to use it is given in the *Medical and Surgical Reporter* of November 9th, 1890. The price is only $3, so that the purchaser cannot lose much if he cannot use it; whereas the probabilities are that it will be worth to the busy practitioner many hundreds of dollars, while for the patient it would save many hours of needless suffering. We hope some of our readers will try it. It does not seem capable of doing harm, if no good.

Dr. Irving C. Rosse, of Washington, D. C.,

Has removed his office to No. 1701 H street, N. W. Practice limited to nervous and mental diseases, as per his card on white board advertisement page, facing advertisement page 50.

The Kentucky School of Medicine,

Under the deanship of Dr. W. H. Wathen, claims that it will have on this year's matriculation register about 350 students—a good illustration that luck is sometimes *pluck*.

Dr. Eugene L. Crutchfield, of Baltimore, Md.,

Has been invited by the President, Sir Henry V. Goold, Bart., to become a Fellow of the Society of Science, Letters and Art, of London. His paper read before the Baltimore Medical Association last February on "The Application of Vocal Culture to the Treatment of Throat and Pulmonary Affections" will be read before the London Society January 20th, 1891.

A War Relic Passes Away.

Dr. E. H. Lewis, of Culpeper, Va., writes that a few days ago Mr. R. L. Lutrell, of Culpeper, showed him a pistol ball which he had carried in the muscles of his thigh since 1862, until a few weeks ago. The ball entered just above the great trochanter, and passed backward and downward to the upper angle of the popliteal space, where "it worked its own way out through the skin without pain or trouble." Thus should pass away all the feelings of the war of a quarter century ago.

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The Baltimore Medical and Surgical Record

Is a medical journal of some 40 pages, begun in Baltimore in October, 1890—mention of which was crowded out of our of December number—edited by Dr. T. H. Graham, 1602 Lanvale street. A fine steel engraving of that great and good man, Dr. H. P. C. Wilson, of Baltimore—a leader in the front rank of American gynæcologists, etc.—forms the frontispiece of this October number.

North Carolina Medical Examining Board.

The following is a post-office list of the membership of the North Carolina State Medical Examining Board: Drs. W. H. Whitehead, of Battleboro, *President;* L. J. Picot, of Littleton, *Secretary;* G. W. Long, of Graham; R. S. Young, of Concord; G. G. Thomas, of Wilmington; G. W. Purefoy, of Asheville, and R. L. Payne, Jr., of Lexington.

The University Medical Magazine

Will add a new department, devoted to medical progress. Drs. Wm. Pepper and James Tyson will conduct the department of Medicine; Drs. D. Hayes Agnew and J. Wm. White will conduct that of Surgery; H. C. Wood, that of Therapeutics; Dr. Wm. Goodell, that of Gynæcology; and Dr. B. C. Hirst, that of Obstetrics—"a magnificent team." This new feature will render an already excellent journal more excellent.

The South Florida Sanitarium,

At Sanford, Fla., under the medical superintendence of Dr. Frank H. Caldwell, is a new, first-class institution in every respect, intended as a comfortable, home-life resort for invalids seeking the benefits of the renowned Florida climate. A more able Physician-in-charge could not have been selected—prominent and honored by the profession of his State, and eminent with the profession elsewhere. The "Sanitarium" is thoroughly equipped to carry out the details of the latest approved treatments for lung and catarrhal troubles, and in fact for all chronic diseases.

Wyeth's Beef Juice.

Our readers should notice the advertisement of Messrs. John Wyeth & Bro., advertising page 5. If what they claim for their "Beef Juice" is confirmed, it will certainly prove a boon to vast numbers of the sick and delicate. This house were the originators of Beef, Iron and Wine, which has given them a reputation all over the world.

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Obituary Record.

Dr. Walter Somerville

Died at his home in Culpeper county, Va., November 25, in the 87th year of his age. He joined the Medical Society of Virginia in 1877, and remained a Fellow till his death. Infirmities of age, however, some time ago caused his retirement from active practice.

Dr. Wm. B. Leary,

Of Potomac, Va., died after a very brief illness, at Quantico, Va., November 26th, 1890. He joined the Medical Society of Virginia in 1882, and was ever afterwards an earnest worker in its interests. For a while he lived in Fredericksburg, Va. About two years ago, he began traveling the State in the interests of Mr. C. N. Crittenton, of New York, and was so engaged at the time of his death. He leaves a wife and several children to mourn his loss.

Dr. Robert Bird

Died suddenly, while asleep, of heart failure, at his home at Cobham, Va., October 31, 1890. He was Deputy-Surgeon-General of Bengal Indian Mission Service Retired List. He moved to this country some six or seven years ago, and located at Cobham, Albemarle county, Va., where he established himself in practice and in the high esteem of his professional associates. In 1885, he joined the Medical Society of Virginia, in which he took great interest till the time of his death. He was a contributor to this journal—his articles evidencing learning and extensive observation and study. It is just such culture as he possessed that gives tone and dignity to the profession, and makes the death of such an one felt as a calamity. He was in the 59th year of his age.

"Bromidia

(Battle) has, in several instances, been found reliable, in drachm doses, given in syrup and water at intervals of an hour until sleep is induced."—A. W. MacFarlane, F. R, C. P., Edin., etc., in *Wood's Med. and Surg. Monographs*, Sept., 1890.—Article: "Insomnia and its Therapeutics."

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ART. I.—Practical Remarks on Nitro-Glycerin and Nitrite of Amyl.*

By JOHN N. UPSHUR, M. D., of Richmond, Va.

PROFESSOR OF MATERIA MEDICA, ETC., IN THE MEDICAL COLLEGE OF VIRGINIA; HONORARY FELLOW OF THE STATE MEDICAL SOCIETY OF WEST VIRGINIA.

Experience in the administration of these agents, and observation of their value clinically, impels me to offer the following remarks: To appreciate fully their therapeutic application and value, we must first define what nitro-glycerin is, and what nitrite of amyl is, their relation to each other, the composition, preparations used, synergists, antagonists, and physiological action.

NITRO-GLYCERIN is a transparent liquid, slightly soluble in water, soluble readily in absolute alcohol and ether, in oil and fats. Taste is sweetish, aromatic. It is prepared by dropping pure glycerin into a mixture of sulphuric and nitric acid, kept cool by ice, pouring the mixture into water, washing well, and carefully drying in a warm room. It is a nitrite of glyceryl.

*Read before the Richmond Academy of Medicine and Surgery, January 27th, 1891.

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Its action is similar to the nitrites upon the blood and organs, but more powerful, because the whole of it is absorbed without decomposition, and the *nitrous acid* is set free in the blood in a nascent condition. (Brunton.)

Forms of administration.—Liq. nitro-glycerini (gr. j in 100 minims of rectified spirit); dose, ½ to 10 minims. Pil. nitro-glycerini ($\frac{1}{100}$ to $\frac{1}{50}$ gr. in cocoa butter); dose, 1, 2 or more. Trochisci nitro-glycerini (tablets $\frac{1}{100}$ gr. in chocolate); dose, 1, 2 or more.

NITRITE OF AMYL, a yellowish liquid, with strong etherial fruity odor, decomposes freely when exposed to air, leaving a large residue of amyl alcohol; insoluble in water, but soluble in all proportions in alcohol, ether and chloroform. It is apt to contain free acid, *nitrate* of amyl, nitro-peptone.

Physiological test: One or two sniffs from a bottle produces flushing of the face; if impure, or has lost its strength, this does not occur. (Some specimens are entirely inert.)

It is prepared by distilling dilute amyl alcohol with nitric acid, sulphuric acid and copper wire; the distillate is washed with caustic soda, to remove hydrocyanic and other acids; the moisture removed by potassium carbonate, and it is purified by fractional distillation. (*Brunton.*)

So much for the preparation of these two agents. Their relationship and consequent similarity of action is based upon the fact that *nitrous* acid, (a very unstable preparation chemically) enters as *the* important factor in their composition—our knowledge of the physiological action of the nitrites having been obtained mostly from experimentation with the nitrite of amyl. But the amyl possessing an independent action of its own, the true test is applied in the nitrite of sodium, the base here having no defined action of its own. Various authentic observers have pointed out the similarity of its action to the amyl nitrite. Barth (quoted by Dr. G. Armstrong Atkinson, *Trans. Ninth Internat. Med. Congress* Vol. III p. 57) pointed out its highly poisonous qualities. In this same article will be found an interesting series of experiments, which lack of space forbids me to more than refer to.

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Nitro-Glycerin here shows its relation through the nitrites, into which it breaks up when it enters the blood. When death occurs from these agents it is due to *nitrite poisoning.* But nitro-glycerin possesses the double action of a *paralyzer* through its nitrite element, and before the decomposition occurs, it is itself *a convulsant.*

We must now glance for a moment at those agents which are synergistic and incompatible.

Synergists of both agents.—All of the motor depressants increase their effect.

Antagonists.—Strychnia, brucine, picrotoxin, digitalis, ergot, belladonna, chloroform. But under certain clinical conditions to be referred to hereafter, some of these agents may be used with nitro-glycerin in alternating doses.

Physiological action.—In most respects this is similar—*i. e.,* acceleration of heart's action, sudden flushing of the face, dilatation of the arterioles in consequence of paresis of the muscular layer of these vessels, sense of fullness of the brain, with tension and vertigo.

Nitro-Glycerin.—Languor, nausea, rapid, weak, dicrotic pulse, gastric pain, sometimes unconsciousness. They produce lowering of the temperature, complete revolution of the muscular system of animal life, dilatation of the retinal vessels. The feeble suffer more than the robust; change in the pulse begins in six minutes and lasts an hour. Motility is first impaired, then sensibility. It lessens sensibility to all forms of irritation and diminishes the reflex functions. It impairs the muscular contractility. Death occurs from failure of respiration; the cerebral functions are only affected when the carbonic-acid poisoning ensues. The hæmoglobulin of the blood is damaged, impairing the oxygen-carrying capacity of the red blood corpuscles, thus accounting for the fall in temperature; the color of the blood is a modified venous hue. The most serious symptoms are readily recovered from. Dr. Murrell, in the Section of Materia Medica, Ninth International Medical Congress, said, when experimenting as to dosage, he took about gr. iij, and remembered nothing more until next morning, when he "had shrewd suspicion from the headache

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that he had on recovering consciousness, that he had been out to dine the day before." Amyl nitrite is more prompt in its action than nitro-glycerin, but less permanent. Both cause sugar to appear in the urine, and increase the quantity of urine voided. Nitro-glycerin is more suitable for *internal* administration.

Therapy.—It may be stated as an axiom regarding these two agents that nitrite of amyl is much more prompt in its action than nitro-glycerin, but the latter (nitro-glycerin) is more stable, and consequently more permanently beneficial results follow its exhibition. In most affections in which their use is admissible, this statement being borne in mind, I shall treat of them as one, specifying those exceptional cases, where nitro-glycerin is to be decidedly given the preference.

Nitrite of amyl has been long appreciated as a useful remedy to stave off or modify paroxysms of epileptic seizure. Considering the more permanent action of nitro-glycerin, analogy suggests that the continued administration of it in the treatment of epilepsy might reward us with positive benefit from a *curative* standpoint. As a palliative, being slower than amyl nitrite, it is not of the same value when the paroxysm threatens.

Both of these agents cut short the cold stage of *intermittent fever*. The administration of amyl nitrite is often followed by a fall of temperature and in some cases, several degrees. Nitro-glycerin is not so pronounced in its effect in this direction.

Both agents relieve *chronic hiccough*.

Nitro-glycerin has been recommended in the treatment of *whooping cough* and *laryngismus stridulus*, but I cannot here speak from my own experience.

Both agents relieve *neuralgia of 5th pair of nerves*, and both have given prompt relief in that form of *migraine* accompanied by facial pallor; but in cases of migraine marked by flushing of the face, the migraine is aggravated by the use of either.

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Tetanus and *hydrophobia* are said to yield to their application, and good results are noted.

They form *antidotes* to strychnine poisoning; but I am much impressed with the thought that, just as opium and belladonna, or their leading alkaloids (morphine and atropine) are antidotal, and yet, a good resultant action therapeutically comes from their exhibition in combination, or following closely one upon the other, we do see cases in which the action of nitro-glycerin is backed up and made more permanent and efficient by giving these remedies in closely alternating doses, say half hour or hour apart, as in some cases of heart failure, of which I shall presently speak.

In reflex vomiting, in some cases of *gastralgia*, the nitrite of amyl and nitro-glycerin stand us in good stead.

But in *angina pectoris*—true and pseudo—the achievements of nitrite of amyl are most marked—a few whiffs often bringing prompt relief in those emergent cases where great urgency of symptoms demands the most expeditious action. No agent finds its way into the system with such rapidity except prussic acid. But though slower somewhat in action, nitro-glycerin even here is more permanently beneficial.

My own experience, as illustrated in the following cases, has given me confidence in these agents. We see instances of heart failure in the fatty heart of those advanced in life where much benefit is experienced; but in those alarming cases of heart-failure, absolutely functional, where there is increased tension of the blood vessels, incident to and following upon feeble heart action, these agents lower tension, and by diminishing resistance promote heart action of greater power, and the ischæmia of the vascular system is relieved, nutrition is improved and some very critical periods tided over.

Case I.—In the last stage of a case of puerperal septicæmia, the patient was profoundly collapsed; skin cool and bathed in a profuse perspiration; pulse absent at the wrist; the only evidence of life was *a fluttering heart.* The woman

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had death impending from heart failure. Stimulation by alcohol, by mouth and hypodermic administration, failed; hypodermics of ether shared the same fate. I administered nitrite of amyl by inhalation, and in three minutes the pulse had returned to the wrist, and the patient opened her eyes. Her skin became dry and warm; ability to swallow was recovered. After watching this patient for a time the remedy was left with an intelligent nurse, with explicit directions to resort to it whenever the heart flagged. The patient took the remedy at intervals, for forty-eight hours, when it was gradually withdrawn, and alcoholic stimulants substituted. She subsequently recovered.

Having the remedy suggested to him by the report of this case (*Trans. Med. Soc. of Va.*, 1886), my friend, Dr. L. Ashton, now of Dallas, Texas, used it in two similar cases with the same gratifying results.

CASE II.—During the past summer I was called in consultation by my friend and colleague, Dr. H. H. Levy, to see a lady at an advanced period of an attack of typhoid fever. Her danger lay in the direction of heart failure incident to long continued high temperature, and consequently impairment of the integrity of the muscular structure of the heart. The organ had failed to respond to stimulants, digitalis, etc. A 1-50th grain dose of nitro-glycerin was administered every two hours; and, to back up, sustain and make its action more lasting, she received a dose of strophanthus and strychnia every two hours—there being one hour's interval between the administration of the two remedies. The effect was most satisfactory to both of us.

I would emphasize here my confident belief that in many cases, such as the two above cited, life will be often saved if we resort boldly and judiciously to the exhibition of these agents.

CASE III—Began as a sharp attack of dysentery, which was promptly relieved, and the patient was convalescent; but, getting up too soon, and under the stress of great excitement incident to alarm for the safety of her daughter, who had a sudden onset of uterine hæmorrhage, she relapsed, and a most obstinate and uncontrollable diarrhœa set up; profound collapse early developed, and no stimulation by the usual agents seemed to make any impression. Nitro-glycerin, in doses of 1-50th grain, every two hours, and then every hour, was resorted to, and three separate and

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distinct attacks of this alarming condition were succeeded by complete re-action, but the bowels could never be controlled, and the patient finally, after a brave struggle for life, succumbed to the inevitable.

It is not needful to comment upon these cases; the prompt and efficient action of the agents is its own commentary.

In *muscular spasm*, such as the spasm in neuralgic dysmenorrhœa, amyl nitrite has proved most efficient, and I confidently recommend the nitro-glycerin in the variety of spasm which characterizes hour-glass contraction of the womb, especially if it has been caused by the improper administration of ergot. It not only will control the muscular spasm, but sustain the heart, depressed, in all probability, by the hæmorrhage present in these cases when the placenta has been detached; and, by the renewed strength thus afforded, enable us to deliver the secundines, and promote uniform and safe contraction of the uterus. These agents have been recommended in the treatment of *eclampsia*, but should not be thus used unless the danger of hæmorrhage is provided against by the administration, fifteen or twenty minutes after the amyl nitrite or trinitrin, of a full and commanding dose of ergot.

In the weak heart, incident to opium poisoning, Dr. A. T. Spencer attributed the recovery of the patient to the administration of nitro-glycerin. My own experience in this field is meagre and vague, and does not bear out Dr. Spencer, though, in justice, I would state my confidence in its efficiency.

In the irregular muscular *spasm, present in renal and hepatic colic*, I believe we have a potent remedy in nitro-glycerin. In some unique conditions of spasm, of the same character, of the stomach and bowels, I know of no remedy so prompt and potent as nitro-glycerin.

Case IV.—A lady was sent to me, in May last (whose case I have already mentioned here), whose nervous system was run down from nerve irritation and tire. She was about 54 years old, and, for three or four years, had been the subject of curious sudden attacks of pain located in the right hypochondrium. These attacks had usually occurred

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once in ten days, but, becoming more frequent, and failing to relieve her, she was sent to me. She was seized with the first paroxysm on leaving the car on her arrival in the city. I saw her within two hours, and found her in an agony of pain. I can best describe it by saying it resembled more than anything else the pain of true angina pectoris, but the pain was located on the right side and in the right hypochondrium; pulse was feeble. I at once administered a full dose of sulphate of morphia and atropia, with tardy relief. During my visit next morning, I found her comfortable, but complaining of abdominal soreness.

From the character of the pain, her anæmic condition, evidences of nerve irritation, and the eructation of gas on the subsidence of the pain, I diagnosed *spasm* of the *pylorus*.

Two hours after my visit, she had a recurrence of the pain of the afternoon before. I determined not to again administer an opiate, but resorted to various anti-spasmodic remedies, without avail. I then administered 1-50th grain of nitro-glycerin, directing that it be repeated in an hour; but, though not entirely relieved, she was so much comforted that she did not repeat the dose for two hours, when, in a short time, the pain entirely disappeared. I directed another dose to be taken upon the first threatening of a return of the paroxysm—this occurred at midnight; 1-50th grain was taken as directed, with very prompt relief. She was then put upon an active tonic treatment of iron, quinine and strychnine; she was subsequently sent to the seashore and mountains, and in September her physician told me that she had had no return of the pain, and that he considered her cured.

Finally, in acute and chronic *Bright's disease*, by lessening vascular tension, and strengthening the force of the heart's action, the kidneys perform their function better; albumen is lessened, or disappears, and the comfort of the patient is much promoted.

Case V.—Mr. ——, mechanic, suffering from valvular dssease of the heart and chronic Bright's disease. When I saw him, he could not lie down in comfort; his heart's action was much perturbed, and his lower extremities were œdematous until the skin was ready to burst. The usual treatment was unavailing. He was put on nitro-glycerin, 1-100th grain three times a day. In ten days the œdema had entirely disappeared; albumen was much diminished; his heart's action was quiet, and by the end of two weeks more,

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he was able to return to his work. He died suddenly from his heart trouble some three or four months subsequently.

I have had obstinate sciatica palliated or temporarily relieved by nitro-glycerin, but, in the case in which I tried it, its curative power was disappointing, nor have I had the benefit from it, in spasmodic asthma, that I believed I had a right to expect.

Finally, it must be remembered that the repeated use of nitrite of amyl begets tolerance in the patient; that we find a great difference in the susceptibility of different subjects, and that sometimes there may occur sudden and alarming unconsciousness with marked pallor and feeble or absent pulse. Nitro-glycerin is the one agent that acts more promptly when exhibited by the mouth than hypodermically.

AUTHORITIES CONSULTED AND QUOTED—Brunton. Bartholow, Potter, Hare, Ringer. *Transactions Ninth International Med. Congress. Annual of the Universal Medical Sciences, 1889.*

ART. II.—History. Causes and Treatment of Angina Pectoris, with Clinical Report.*

By W. R. JACKSON, M. D., of Mobile Ala

ASSISTANT DEMONSTRATOR OF ANATOMY MEDICAL COLLEGE OF ALABAMA; VISITING PHYSICIAN TO CITY HOSPITAL, ETC.

The definition of the words angina pectoris is suffocation at the breast, or chest. It is an idiopathic or symptomatic neurosis, characterized by a sudden sharp pain in the chest and a sense of impending death. Various other terms have been used by authors who have named the affection in accordance with their anatomical notions of its seat; as in the heart, lungs, diaphragm, and even the sternum.

Among these antiquated names are cardiagmus cordis sinistri, convulsive asthma, asthma dolorificum, diaphragmatic gout, arthritic asthma, syncope anginosa. pneumonalgia, sternocardia, sternalgia, and the like—all of which have been written on by different authors.

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* Read before the Mobile County Medical Society, 1890.

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The best term applicable to this affection would be *cardialgia*, were it not that this is applied to a certain condition of the stomach. The most common, or generally accepted term, *angina pectoris*, is one sanctioned by usage, and merits to be preserved, since it presupposes nothing of the nature of a much-discussed affection.

The ancient medical author, Aratæus, observed symptoms of angina pectoris. The historic cases of Seneca, Jno. Hunter, Jno. Leech, and Charles Summer, are familiar to most medical men.

It was in the end of eighteenth century that facts noted in connection with the subject were authentically observed, and clearly described, almost simultaneously in France and England; since then, many vivid descriptions of angina pectoris have been given by various writers; but the study of the complaint leaves several points to elucidate, upon which there is more or less discord among authors.

Clinically speaking, a typical case of angina pectoris is easily diagnosed, although the principal symptoms are subjective.

Affections with which it is liable to be confounded are the cardiac pain of aneurism; the angina-like pain in cardiac neuroses common to hysteria; sexual hypochondriasis or excessive use of tobacco; and the intense cervico-brachial neuralgia in chronic basilar meningitis.

It requires but little diagnostic acumen to differentiate the pain of biliary calculi from this affection, and in spasmodic asthma there is rarely present that unspeakable sense of sudden death.

The constant phenomena of the disease are *sternal pain*, with a feeling of anguish and of sudden death. No pain can compare with that of cardiac angina. In no disease is there so much real physical agony, and such keen anxiety. Words are hardly required to make the diagnosis clear to the observer.

The pain, paroxysmal in character, comes on in attacks more or less remote at irregular intervals, and may last from a few minutes to several hours. Its greatest intensity is at

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the seat of election—the heart—whence it radiates in extremely severe cases in all directions—to the head, arm, and hand, and even to the lower extremities. In women, extreme sensibility of the breasts is common.

Each patient has a particular term to describe his sensations. They have been compared to a stab in the heart; to a sword plunged into the sternum and left side of the neck; to the sudden thrust of a hot iron into the heart; to strangling and suffocation; to the sudden grasp of an icy hand, which gradually tightens until it feels like a clasp of steel crushing the heart to atoms.

The indefinable anguish that follows the local violence, and puts death before the eyes, is stated to be like the anxiety felt by a drowning person. At the outset of the attack, the patient instinctively places his hand over the seat of the pain, terror is depicted on his pallid countenance, he is insensible to surroundings and afraid to move, but the integrity of the intellect remains undisturbed. In some anomalous cases only have cerebro spinal symptoms been noticed. The patient tries, by strong inspirations and deep sighs, to increase the capacity of the chest, which feels as if being squeezed in a vice.

The respiratory phenomena are not uniform in character. There is seldom difficulty in breathing, and auscultation or percussion reveals nothing, but the chemistry of respiration is usually impeded. In some cases, a suspension respiration, or that peculiar form of dyspnœa known as the Cheyne-Stokes respiration, is observed. The patient sometimes experiences the sensation of a foreign body in the air-passages. The circulatory symptoms are somewhat variable.

Except in cardiac complication, the pulse preserves its regular rhythm; but some observers report intermittency, irregularity, and feebleness; and the sphygmic perturbations of the attack indicate tension of the systemic arteries. Cardiographic tracings are said to show diminution of the amplitude of the pulse-wave, with blunting of the apex, slow, or greatly postponed recoil and obliteration of the dicrotic wave.

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The patient's phonation and deglutition are interfered with during the attack. He speaks but little, and that like one suddenly surprised, full of fear, and intent on himself only.

The stomach is often sympathetically affected, giving rise to eructations, vomiting, and difficult digestion.

Several writers report malaise of the bladder, with a desire to micturate often, but state that no morbid changes appear in the urine. Strangury, ilio-scrotal neuralgia, and swelling of the left testicle, have been noted in gouty or rheumatic patients.

If the patient does not die from syncope in the middle of the attack, as more than half of them do, the angina passes off with a profuse perspiration and the escape of flatulent gas from the stomach, disappearing as suddenly as it came on, leaving the exhausted patient with a desire to sleep after the terrible ordeal through which he has just passed. Following the attacks, there may be some of the many nervous phenomena, such as visual troubles, insomnia, and dreams peculiar to heart affections.

As the disease advances, the attacks become more frequent and violent, and more easily brought on, until one of them ends life.

Such is the description given by Dr. Irving C. Rosse, of Washington, D. C.

As for myself, I have had but little experience in this affection, as I have seen only two cases, one of which I will describe:

A middle-aged lady, who has borne five children, has been suffering with angina pectoris for twelve months; the attacks come on twice a month. I was called to see her in one of these attacks—the worst she has ever had—so stated the patient. When I saw her, she was suffering severe pain in the region of the heart—the pain extending down the left arm to the fingers—and she said she was numb all over. She was in a profuse cold perspiration; her face was pale—purplish under the eyes; extremities cold; suffering great dyspnœa; her pulse was irregular and would intermit three or four beats at a time. It would beat five or six beats with average strength and fullness with normal rhythm; then it

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would intermit and become irregular and weak. Listening over heart when beating regular, I could hear no murmur —the sounds were normal; but the irregularity would come on, and it seemed the heart would flutter and then stop three or four beats, and then begin with great force.

I lowered the patient's head, administered hypodermatically $\frac{1}{100}$th grain of glonoin, gave her two ounces of whiskey, applied hot mustard to her chest and hot water to her feet; then I gave her one-fourth of a grain morphia hypodermically which seemed to give no relief in forty minuies. Then I gave, by the same method, one-third of a grain of morphia, and in one-half hour patient was relieved and was asleep—heart began to act with normal rhythm, but very rapidly, and seemed weak. She slept two hours, and awoke feeling much exhausted.

I put her on a tonic of iron, quinine, strychnine, arsenic; also on one per cent. solution glonoin, to be given in one minim doses three times a day as a preventive. She has not had another attack, since which is about one month.

Happily for mankind, cardiac angina is a rare disease; it occurs mostly in men, among whom it is ten times more frequent than among women. It has been observed twice with all the characteristics of two epidemics—one in Germany, and again on board a French man-of-war, where it was owing to the action of such general causes as bad hygiene and the excessive use of tobacco.

Many authorities state that angina pectoris is a disease common to men past forty years of age; but the influence of age as a causative factor is far from being true, as this affection has occurred in persons of 21, 15, and 12 years; and in England and France it has been observed in infants. It has occurred in women about the time of the menopause.

Heredity is of some importance as a predisposing cause. In a case of a soldier—he had two brothers and a sister and father, all to die of the same affection. Other cases of a similar kind have occurred, as noticed in medical literature.

Sedentery habits and affluent circumstances furnish the principal contingents of this disease; but climate, seasons, and regimen, play an important part in its development. It is more common in the British Isles and among the Teu-

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tonic races than it is in France, Italy, or Spain. Its place of predilection is Ireland, which passes for the country where heart troubles are most frequent; but it must not be forgotten that daily altercations are almost the hygiene of the Irish.

Excessive indulgence in tobacco is a causative factor. Eight cases of nicotine origin have been described, in which the attacks ceased when smoking was stopped and returned when the patients began smoking again. Depressed arterial circulation from nicotine, as observed microscopically in the interdigital membrane of a living frog, is not without its lesson to the medical man. Tea, alcohol, and tobacco, all of which are largely used by the Northern races, are three prominent causes of angina pectoris. To these may be added the harmful influences of cold and damp residences; the reflex influences arising within the body from thoracic or abdominal disease; the influence of other diseases, notably anæmia and the vaso-motor disturbance of persons suffering from lithiasis; the predisposition brought about by previous attacks; by organic affection of the heart, and by the state of the stomach.

Sciatica has been known to replace angina pectoris, which disappeared when this malady showed itself; and vegetable colic and angina pectoris have succeeded and replaced each other turn by turn—the former appearing when the latter disappeared.

Among the occasional causes to be mentioned are anxiety, sudden anger or joy, hunger, walking or riding against a cold wind, walking up an inclined plane, or straining at stool—any exciting incident may bring on an attack.

Two classes of opinions are now held in regard to the pathology of angina pectoris—one having relation to an organic and material lesion in the heart, the other to a nervous affection or functional perturbation. Some of the older theories are: Ulcer or inflammation of the mediastinum; fat in the mediastinum and pericardium, and ossification of costal cartilages; ossification of coronary arteries; aortitis; cardiac ischæmia.

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Dr. Austin Flint says: "That angina pectoris has a pathological connection with organic disease of the heart is certain; but upon what particular condition or circumstance, common to different forms of organic disease, it depends, is not ascertained."

The theory adopted to-day regards the malady as a neuralgia of the cardiac plexus—sometimes idiopathic, at others symptomatic of lesions of the heart and of the great vessels. The opinion generally admitted is that the disease is sometimes a simple syndroma dependent on structural lesions of the heart or other organs, and at others a simple neurosis or a neuralgia not due to any appreciable lesion.

Aortic insufficiency, aneurism, and fatty and other degeneration of the heart-muscle are the principal anatomical lesions reported by the older writers. Changes in the nervous apparatus of the heart have been noted by late observers, who have found microscopic evidences of inflammation in the cardiac plexus. Some suppose the primary lesion to be in the spinal cord. Whether this be true or not, it is known that the starting point of angina is most often in the domain of the pneumogastric—that is to say, it may be cardiac, gastric, or pulmonary. A lesion of the terminal branches of the coronary nerve may cause acute distension of the heart, the keen pang from which may be reflected, by way of the sympathetic branches of the cardiac plexus and the spinal cord, to other parts of the periphery, probably to *all* parts of the body.

The prognosis is favorable where the cause is tobacco, cold, or reflex of the vagus, provided the cause be removed. Where there is organic complication the danger is greater; but typical cases of angina pectoris have been known to survive twenty years or more, the patient taking moderate exercise during this time.

Where the cases are fatal, the patient dies in the middle of the attack from paralysis of the heart from over-distension of its cavities. By some it is said the great pain is due to the pressure (on the nerves of the heart-muscle) of the excess of blood in the cavities of the heart. Death is gen-

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erally sudden, but not always. Dr. Flint says this occurs more often in aortic than mitral disease, though it may occur in either; also in myocarditis, fatty degeneration, disease of coronary arteries, or of the aorta. The danger of a given paroxysm is in proportion to the feebleness and irregularity of the heart's action, together with a feeling of impending dissolution.

If angina pectoris is symptomatic, there is but little chance of a cure. During the attack a few whiffs of ether or chloroform may be carefully inhaled, but nitrite of amyl is much better. It is recommended that the patient should carry a small vial with him all the time, so he may be ready to ward off a threatened paroxysm. Nitrite of amyl is not a specific, but is indicated where there is much blood pressure. Use chloroform and ether with great care, as they are depressing. Nitro-glycerine is said to be the best remedy to relieve the paroxysm and prevent its recurrence in many cases.

Some patients obtain relief by getting into certain positions—as, for instance, when the head is thrown back and the spine strongly extended, as in opisthotonos. How and why this position brings about relief is not known, and more than the fact that pressure on the spinous or transverse processes of the cervical and upper dorsal vertebræ or the regions of the inferior angles of the scapulæ excite and increase the severity of an attack. Placing the feet in hot water is a valuable adjunct to the treatment. Dry friction, hypodermic injection of morphia, dry cups between the shoulders, with the administration of stimulants and anodynes, are also useful. Revulsive application to the chest and swallowing pieces of ice have been found useful.

Trousseau regarded the malady analogous to epileptic seizures; hence he called it cardiac epilepsy, and advised long-continued use of belladonna as a preventive.

Electricity has been and is highly recommended to arrest the paroxysms and postpone its occurrence. Recent authorities speak highly of galvanism, and claim also to have cured angina pectoris with the faradic current. Electric

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treatment has proved *so* useful in angina pectoris that it is now looked upon as the only direct remedy. The wearing of two highly-magnetized steel plates over the heart is very useful. The actual cautery to the inner side of the thigh has been highly extolled as a revulsive.

Nitro-glycerine should be continued several days after the paroxysm, if the arterial tension is great.

General measures applicable to the treatment of cardiac lesions may be adopted, and the strictest personal hygiene should be pursued. A nutritious diet, consisting of vegetables and milk principally, is to be recommended; and where practicable, the grape cure. The disease has been known to be suppressed and arrested, and even to disappear, on interdicting the use of tobacco.

Indications for treatment during the paroxysms are:

1. To relieve pain, which may be done by hypodermic injections of morphia or inhalation of ether or chloroform.

2. To stimulate the heart to action—done by use of brandy, whiskey, or sulphuric ether by hypodermic injections or by the mouth.

3. To keep or maintain the continued rhythmical action of the heart, and to diminish the arterial tension, which is best done by nitro-glycerine, nitrite of amyl, or electricity or galvanism. The cases most amenable to treatment are the purely cardiac kind, without any cardiac lesions.

Dr. Anstie gave arsenic as a tonic and preventive. It is well to put your patient on a tonic of iron and arsenic, or quinia with some aromatic.

If there is a gouty or a rheumatic diathesis, it should be met by appropriate treatment, and a suspicion of syphilis should likewise be suggestive. Sea-baths and travel are to be recommended. The patient should avoid all commotion—moral and physical; he should lead a quiet, cheerful life, and should religiously abstain from tea, alcohol, and tobacco.

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Art. III.—The Prophylaxis of Diphtheria.*

By LLEWELLYN ELIOT, M. D., of Washington, D. C.

The congratulations over the recovery from an attack of diphtheria of Dr. Henderson Suter, of this city, have hardly ceased to resound, when we are called upon to join in the obsequies of Dr. John W. Dunn, who but recently perished with this disease. Both of these physicians contracted diphtheria in the course of their professional duties. These unfortunate occurrences admonish us to look well about and see what measures are available for the protection of ourselves as well as of the community, from the spread of this ravaging scourge.

Diphtheria is one of the most common, most contagious and most fatal of the diseases of childhood, and when once an epidemic is started, it spreads from house to house. It is a disease of antiquity, and is supposed to owe its origin to a micro-organism. The specific germ is generally inhaled, or it may find a suitable soil for development upon an abraded surface.

When we attempt to prevent the occurrence of disease, we have two methods which we must adopt before any degree of success will be attained:

1. Place the body and mind in a vigorous state of health by enforcement of the rules of hygiene.

2. Investigate and remove the causes of diseases which we find in operation.

Following strictly the laws of hygiene will enable us to prevent the causes of many diseases, as these laws are applications of the etiology of disease, and the proper understanding of etiology is the basis of intelligent methods for action in the matter of prophylaxis. It is not necessary to understand perfectly the causation of disease; we must act upon the probability of our understanding them, and endeavor to remove such conditions that in our knowledge appear to be the causes of disease. No

* Read at a meeting of the Medical and Surgical Society, Washington, D. C., January 19th, 1891.

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cause is so small as to justify us in neglecting it. Lancry and Dumez have each cited instances showing the area of contagion in diphtheria to be very limited, not extending beyond a few feet.

Preventitive measures here are of the utmost importance. The means generally adopted to prevent the spread of diphtheria are many, the principal of which we will consider.

Isolation and disinfection of the patient, thorough disinfection of the room in which a patient has been treated, of the bedding, furniture and clothing, with the exclusion of noxious gases, as from sewers or accumulation of filth, is first in the list. According to Dr. H. B. Baker, Secretary of the Michigan Board of Health, there occurred during the period of one year 218 outbreaks of diphtheria. In 102 of these outbreaks, without the employment of disinfection or the enforcement of isolation, the average number of cases to the outbreak was sixteen, and the average deaths was 3.26; while in 116 outbreaks, with the employment of disinfection and the enforcement of isolation, the average number of cases was 2.86, and the average deaths .66. Therefore these precautionary measures prevented thirteen cases, and 2.57 deaths for each outbreak; in the total, 1,545 cases and 298 deaths.

Disinfection, as usually employed, is by burning sulphur, and upon this point it is well to quote from a note of Dr. E. R. Squibb to Prof. J. Lewis Smith. Prof. Smith, having witnessed the failure of sulphur-fumigations during an epidemic of diphtheria in 1887–88, in the New York Infant Asylum, obtained the views of Dr. Squibb upon the cause of the failure and the efficacy of the fumigation.

Dr. Squibb writes: "Within the past ten years the efficacy of sulphur-fumigation against infectious material has been repeatedly denied and re-affirmed upon very good authority; and observations, apparently made with accuracy and care, have been reported from time to time to prove both sides of the question, so that all that can now be said is that burning sulphur is of doubtful efficacy, with the weight of the highest authorities in bacteriology against it. But it must be added that it is still largely used by very intelligent bodies

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in large institutions, boards of health, etc., where it would not be likely long to maintain and unearned confidence.

"How often the fumes are applied dry, and how often moist, no one can tell from the current record; and how many of the failures of the dry gas would be successes in the presence of moisture, there is no means of knowing.

"Formerly, when sulphur was burned in closed chambers as a disinfectant, the surfaces were all wetted, and the pot of burning sulphur was set in water or wet sand, that the heat might evaporate off a constant supply of watery vapor. These conditions are now frequently, if not generally, neglected, and where this is the case, failure on principle should be the rule.

Nearly all, if not all, chemical disinfectants are in a state of tension, ready to change on coming in contact with the matter to which they are applicable, and these changes are either by oxidation or deoxidation, and the moment of greatest power or activity is the moment of change, when they by reacting on infectious matter pass from a state of tension to a state of rest under new relations. The agency through which these changes almost universally become operative is the vapor of water.

"When sulphur is burned in a close chamber, the dioxide is formed by condensing two molecules of oxygen from the air upon each molecule of the sulphur, and a heavy gas is the result, which tends to settle at the bottom of the chamber and to run out through the lower cracks. Any moisture present is at once seized by this rather inactive anhydride, first forming sulphurous acid, and then, by oxidation from the air, sulphuric acid. The dry gas, or anhydride, not only seizes with avidity all watery vapor in the air, but also the water held in the surfaces of all bodies with which it comes in contact, and in the presence of this moisture only is it ready for further oxidation. Then it is by this oxidation that it deoxidizes the matters with which it is in moist contact, filling the surfaces of these matters first with sulphurous acid; then, by the change, with sulphuric acid, and it is during these changes that its power is exerted. If there be no moisture supplied to the burning sulphur, that which was present in the air and the surfaces of the chamber is soon used up, and the dry gas remains indefinitely in a comparatively inactive, ineffective condition. The dry, passive anhydride would necessarily destroy all organisms which breathed in any degree, because breathing surfaces are moist. But in embryonic life, protected by

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shell, as in seed, if the shell be dry, the gas would be impotent. Many bacteriologists have admitted that burning sulphur would kill bacteria, but not germs."—(*Cyclop. Dis. Children*, Vol. I, p. 652).

Prof. Smith frankly admits his mistake in the fumigations employed, as he burnt the sulphur in the absence of moisture.

Were the facts as presented by Dr. Squibb more generally known and appreciated by health boards and medical men, the results of disinfection would be better. As the destruction of the specific principle of diphtheria is so important in preventing the spread of the disease, any safe measures that may be known should be employed in conjunction with the sulphur-fumigations.

Harold C. Ernest (*Wood's Reference Hand-Book of Medicine*, Art. Diphtheria, Vol. II, p. 474) recommends sulphur, 12 pounds to each 1,728 cubic feet of space; free employment of a solution of copperas, 1½ pounds to 1 gallon, or the solution of corrosive sublimate, 1 to 10,000. That the nurse should keep the mouth closed when over a patient; any caressing or fondling should be absolutely prohibited. He also states that it is a good plan to wear cotton in the nostrils as a filter.

A. Jacobi (*Trans. Phila. Co. Med. Soc'y*, 1888,) recommends that in a locality where diphtheria is present the children should not attend church or school, their throats should be daily examined, nasal catarrh should be treated, enlarged tonsils should be reduced by the galvano-cautery, etc.

There is one more method to which I desire to call attention. It is the constant vaporization of turpentine in the house where diphtheria is present. For this method I claim almost infallibility. The method which has been adopted in the quarantine wards of the New York Infant Asylum differs somewhat from the one I have already advocated, in that pure turpentine is not used, but the following formula is prepared:

℞. Acidi carbolici, ℥j.
Ol. eucalypti, ℥j.
Spts. terebinth, ℥viij—Misc.

Add two tablespoonfuls to one quart of water in a pan

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with a broad surface, and maintain in a constant state of ebullition or simmering, in the room occupied by the patient. No subsequent cases have followed the employment of this vapor.

Delthil, and following him Schenker, used a mixture of coal tar and turpentine burnt in the patient's room. Schenker's observations led him to believe the good effect following this treatment was owing to the turpentine, and being germicidal and antiseptic, it was effective as well when vaporized and inhaled as when taken into the stomach.

My plan is to vaporize the turpentine without the presence of any other agent. Mention is made of it in Professor Smith's article on Diphtheria (*Cyclopædia of Diseases of Children*, Vol. I, pp. 654 and 668).

To prove my claim for the superiority of this means as a preventitive over all others, I will cite a few cases in which it has used. These instances are selected from many, but are the most conclusive as to its efficacy. It is well to state that the usual remedies employed for the treatment of diphtheria should be employed; for I speak of the prophylaxis, and *not* of the treatment of the disease. In case of death, the vaporizations of turpentine are equally effective.

Case 1.—Charles H. W., white, aged 18 months. Showed indisposition to nurse on the morning of March 31, 1884. I was called at 6 same evening; diagnosed malignant diphtheria. Ordered isolation and the usual remedies, together with the vaporization of turpentine. Child died at 4 o'clock the next morning. No other case developed.

Case 2.—A., white, aged 5 years. Diphtheria. May 22d, 1884. The usual remedies, but turpentine was not used as directed.

Case 3.—M. A., white, aged 8 months. Diphtheria contracted from No. 2. May 28th, 1884. No turpentine vapor. Died June 3d, 1884.

Case 4.—H., white, aged 34 years. Diphtheria contracted from Nos. 2 and 3. No turpentine.

Case 5.—J. W. N., white, aged 4 years. Case seen in consultation, May 8th, 1885. The attending physician had failed to isolate the child, allowing it to play with the rest of the family; nor had he told the family the child was suffering from diphtheria. Died next morning, and had a

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public and a largely attended funeral. No turpentine allowed by the physician, who did not think it would be necessary. Death certificate of pneumonia returned to the Health Officer. Other cases followed.

Case 6.—P. L. P., white, aged 3 years. Diphtheria developed on November 30th, 1885. Turpentine vaporized very thoroughly. No case followed, although the family consisted of six persons.

Case 7.—Wm. M., white, aged 4 years. On January 5th, 1886, I was called to perform tracheotomy on this child by the attending physician. It was a most horrible case. Although the child lived some miles in the country, I preferred to return that night to do the operation, having suggested slight changes in the treatment pursued. Turpentine was used freely. No other case developed, and recovery followed without tracheotomy.

Case 8.—John S., white, aged 3 years, residing in the same house as No. 7, was seen at the same visit. The same course was pursued, and recovery followed, no new case developing.

In cases Nos. 7 and 8, the surroundings of the children were far from encouraging. Living in four rooms, the two families had free access to their sick, while, in addition, one mother had with her a nursing baby of two months. There were in all ten persons in the house.

Case 9.—A. H. Y., white, aged 2 years. Was circumcised on January 31st, 1886. On the fifth day, diphtheria attacked the penis; the throat soon became involved. Vaporization of turpentine was carried out so faithfully that the air of the entire house was saturated. As this was the only child, the parents and the grandparents were constantly in the room; the mother against my protestation, as she frequently suffered from ulcerative pharingitis. No other case developed. Recovery.

Case 10.—W. B., white, aged 4 years. On April 9th, 1886, was called to attend him for diphtheria. Turpentine vaporization in the room and about the house. No other case developed. Recovery.

Case 11.—N. W., white, aged 4 years. Diphtheria developed April 24th, 1887. Parents were visiting relatives in a large boarding-house. Isolation and the faithful use of turpentine vapor prevented the development of any new case. Recovery.

Case 12.—B. A., white, aged 6 years. Diphtheria developed November 22d, 1887. Isolation and turpentine vapor-

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ization. No new developed case, but the child died November 27th, while I was intubating it.

This case is a strong recommendation for the turpentine vapor, for the reason that during the entire five days of its illness the child was not on its bed for two hours. There were the father, the mother, and three uncles in the house, and one or the other carried the child over the shoulder, and I spent very much time in the room also; but in spite of this, not one of them suffered from the slightest affection of the throat.

Case 13.—W. S., white, aged 3 years. Seen in consultation on June 4th, 1888, the child having developed diphtheria some days before. The surroundings were well calculated to propagate the disease. The free use of turpentine as a vapor and internally prevented any new case, and resulted in the child's recovery.

Case 14.—P. M., white, aged 3 years. Developed diphtheria November 22d, 1890. As this child was an inmate of St. Ann's Infant Asylum, I was quite apprehensive of a siege of the disease. Turpentine vapor prevented any new case. Recovery.

Case 15.—J. M., white, aged 3 years. Seen at the same time, and at the same institution. The same measures were adopted, and no new cases developed, although the disease was afterwards introduced on December 21st by the admission of two children from an infected quarter. Recovery.

I might continue this list of cases, but enough instances have been cited to establish my views upon a solid foundation.

I do not claim that the means which I have advocated will prevent the spread of diphtheria absolutely and entirely; but what I do claim is that in my hands it has given me entire satisfaction.

In 1887 I wrote, when recording my experience in 1886, as follows: "These, to my mind, show the very good results following the use of turpentine as I have directed, and any physician or surgeon could attend and operate upon any case did he surround himself and his patient with its vapor. Let us have no shields, respirators, handkerchiefs, or such like, but an air saturated with turpentine. This will apply most forcibly to those cases requiring tracheotomy or intubation." (*The Medical Register*, April 30th, 1887.) In

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1891, I see no reason for deviating one iota from this conviction—especially as I am the possessor of a weak throat, and have not yet contracted the disease.

1106 *P street N. W.*

Art. IV.—The Radical Treatment of Pelvic Inflammation in Women.*

By JOSEPH PRICE, M. D., of Philadelphia, Pa.

The pathology, and palliative and conservative treatment of pelvic inflammations in women having been discussed by men of great and varied experience, it only remains to be added to their statements and arguments, as exponents of a midway position in regard to operative advisability, that all the methods of conservatism and palliation are daily practised by those who most strongly urge the necessity for early resort to surgical interference as a means of obviating the necessity of mere palliation in a class of cases rendered incapable of relief by surgical endeavor, simply by the delay which at first strove to palliate them.

This is in no wise suggested as hostile to the plea of conservatism properly understood. It is rather urged as a plea for the necessity of discrimination in this class of work, whereby we are to determine what cases need early interference, which ones are in doubt, and which will be clearly made worse, on the one hand, by "palliation," and on the other by operative resort. The plea is urged by experimentalists that by operation we mutilate our patient, that we unsex her, that we destroy the sexual instinct, and that hence we blight the peace of marital relations. Let us see. Given a wife whose every approach to the sexual act is misery, as the complaint so often reaches my ears, is there here no blight to marital relations? or must the idea of the hypersensitive surgeon and the prejudiced husband be nursed while the woman suffers? Is there no reckoning to be made of pathological unsexing, even though the remains

*Read by invitation before the Medical Society of the State of New York, in session in Albany, February 3, 1891.

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of worthless organs are present, and does removal do more than disease? We must say, No, emphatically. If, after a conception or two, sterility follows, we may safely assume that pelvic lesions, sometimes of a dangerous character, exist.

What, then, are some of the most important lesions that should lead to an early resort to surgery? It is once for all to be insisted that in the presence of adhesions the exact pathological condition cannot be actually determined by the bi-manual or any examination, neither can the amount of pathological deposit be categorically insisted upon. It is to be remembered that adhesions simulate deposit, and that when these involve all the important pelvic viscera, when they are freed, the amount of tissue to be removed may be very small. This shows that adhesions themselves may be a sufficient reason for operation, by the fact of pathological involvement they entail, and the suffering that consequently ensues. Next to simple or general adhesions, is to be considered tubal occlusion, with or without the retention of fluid. If the fimbriæ of the tube are shut off from and bound down to the ovary, there is certainly a condition of sterility. The question of breaking up these adhesions to establish patulency of the tube without other interference is, I think, for the most part, deserving little serious consideration. The desire is meritorious; but the accomplishment is so little to be counted upon and the risk consequent upon the attempt so fraught with the danger of the necessity of re-operation, that the odds are much against the experiment. Lest this statement may appear arbitrary, I need only refer to the difficulties of re-operation for adhesions. When these exist, the boldest and most sanguine operator will greatly hesitate to promise to cure them or their complications by re-interference. Adhesions once formed after an operation are prone to re-establish themselves, unless a sufficient reduction of their territory can be obtained and their extent so reduced. In operation upon the pavilion this cannot be promised. In the presence of such facts, it is plain that little can be promised by such

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procedure, and that the occasions for its adoption must be exceptional in the extreme. That once in a thousand times such plan may be successful is no reason for recognizing it as anything but an exception that proves the rule of its inefficiency.

When there are real degenerative changes in the appendages, only the extremists in the theory of conservatism see anything but loss of time in palliation. That tubes can be chronically enlarged receptacles for pus without being themselves diseased is, I believe, incapable of demonstration. He must be called into question who has put the statements on record in which huge pus tubes have been evacuated and the structure of the tubes found unchanged. We must here differentiate catarrhal deposit from pus, and an acute from a chronic deposit. I have specimens which I will gladly submit to any committee, and will await their decision whether in any one of them there was pus without a corresponding destruction of essential tubal structure. Then, again, cases are recorded in which conception followed when such a tube was allowed to remain. It is to be regretted that these cases, like the tricks of the ancient magicians, are so recorded and witnessed as only to excite our wonder, without carrying sufficient proof to convince.

Mixed cases, in which pathological growths, combined with adhesions, are a constant source of danger and misery to the patient, need only to be cited to hold their place. I refer chiefly to small cystomata, dermoid cysts and suppurating sacs from any cause. Operators without a real knowledge of these conditions must not be accepted as carrying authority in their assertions that they do not exist outside of limited territory. Men who operate for pain, not for real lesions, must change their idea of pelvic surgery before they can expect success, amid the complications of its real pathology.

An operator who is striving to do necessary work only, without selection of cases which must be successful, must meet many things sufficent almost to drive him from the field. Too much conservatism and too much palliative

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treatment fill our hospitals and homes with constant sufferers, whose delivery must be prompt, or death is certain. Such cases at the end are too often cited as a reproach to the efficacy and accomplishments of surgery, when in reality they are the sign-boards of the dangers of delay and fearful procrastination.

Let us cite the following: From this week's correspondence I will quote from the letters of three physicians living in as many States of the Union.

No. I says: "Wednesday night I saw a woman who begged me to operate; but I said, No, and in about twenty hours I made an autopsy, and found a ruptured ovarian abscess and gangrenous gut, caused by a strong band of adhesions. Less than two years ago I warned her of her danger, but she did not heed it. She would not call me in consultation until the last moment, for fear I would advise an operation."

The second physician gives a lengthy history, from which I make brief extracts: "Consulted over a year ago by young married lady. Found evidence of tubal disease, with occasional offensive discharge through uterus, apparently consisting of accumulations of pus coming from the right tube. As the patient was up and about and apparently in good health, I did not advise immediate operation, but said I would interfere in case she had another inflammatory attack. Soon afterward the patient had another severe attack of what was called peritonitis, and was told by the attending physician that an operation done at that time would surely be fatal. She recovered slowly, but her sufferings increased to such an extent that she demanded relief, and last spring "Z." was called in, who curetted the uterus. As this naturally did no good, he performed abdominal section. After working nearly two hours, having removed the left tube and ovary, which had not given much trouble, together with an inch or more of the uterine end of the right tube, the patient not unexpectedly went into collapse, and had to be hurried to bed, leaving the right ovary and the diseased part of the right tube in place. The patient recovered and did well for a few weeks, when pains re-

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turned in region of right ovary. In six weeks she was taken with severe spasms and carried into a hotel from the street and "Z." was called. He declared it was now a case of nervous disease, and a nerve specialist was summoned. The wound, however, now re-opened and began to discharge pus, and the nerve specialist said it was not in his line, so a general practitioner was called, who treated the case with a good deal of discretion, according to his light. Several weeks ago a mass was found behind the uterus, so another gynæcologist was called, who opened the mass and put in a drainage tube. The nervous symptoms, if anything, were worse than ever; and so, after seeing the poor girl suffer a few weeks more, the husband finally came around to see your humble servant. I found purulent discnarge enough to soak two napkins in twenty-four hours. Violent chronic spasms every few days, with opisthotomos; patient feels her health and strength are giving way and clamors for an operation, preferring death to her present sufferings." I will briefly state that a complete removal of diseased organs was made, and at last accounts the patient was doing well.

Case III is sad and brief: She was seen by half a dozen consultants. Had been suffering agonizing pain for more than a month; high temperature, rapid pulse, pelvis completely choked. I saw her, the seventh consultant, and urged section. The physician writes me: "Section was made, by Dr. Blank, the third day following your visit. A large quantity of pus was found in the peritonæum; removal of the appendages was impossible, owing to extensive adhesions. The patient rapidly sank, and died two hours after operation."

To justify my position as to what can be done in these desperate cases, I will cite case IV, which came to me in to-day's correspondence from a distinguished operator and teacher:

January 25, 1891. Two weeks ago I made a section on a puerperal woman, just one month after confinement She was profoundly septic, with pulse 140 and temperature va-

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rying from 102° to 103.5°, and with a tumor on right side. The intestines were adherent to the abdominal wall and adherent to each other. There was general peritonitis. On carefully separating the coils, stinking pus welled up into the opening. On removing this and making further exploration, I got into a large pus tube, which had ruptured and communicated with the abscess cavity above mentioned. Enucleation, if possible at all, would have killed the patient on the table. She was livid and covered with sweat when the operation was commenced. Irrigation of the pus cavities and packing with gauze were rapidly done, and in fifteen minutes she was again in bed. Though still discharging pus, which for days was fæcal in character, she is now free from fever and practically convalescent.

Now, this patient I would not have touched but for your work, which showed that the puerperal cases can be helped.

Death comes after such delays as those I have just cited in forms varied, fearful and hideous as the nightmare of the battlefield. As Bernutz and Goupil long ago pointed out, tuberculosis past treatment by hypodermic injections *a la* Koch, or hydrogen by the rectum, is begotten by the presence of pus.

Amyloid kidneys from the same cause entail all the well-known miseries of that complaint. The heart labors under a general exhaustion. Nervous symptoms, in all their complexity, are entailed to complete the wreck. All in all, the picture is far from fascinating, supplemented, as it so often is, by general exhaustion from suppurating tracts and sinuses implicating all the important viscera.

With all this must be contrasted the general efficiency of early operation in such disease. And with such operation is also to be contrasted the so-called conservative operative procedures. These all are tentative. They promise much, hope more, and accomplish little. Of such class is vaginal puncture for pelvic abscess, so-called; of such is electrical manipulation for the restoration of fimbriæ, or for destruction of chronic pelvic adhesions. So, likewise, is to be considered aspiration, with all its uncertainty, and massage, which is dangerous as it is efficient.

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Clinical Reports.

Supra-Pubic (McGuire's) Lithotomy in a Child—Successful.

By E. P. LACEY, M. D., of Bessemer, Ala.

On the 25th of last June, I was called in consultation with Dr. J. W. Carter, to see Walter S., æt. 4 years, who, Dr. Carter informed me, was suffering with symptoms of stone in the bladder. We chloroformed the patient, and, on introducing a steel sound, detected a stone at once. We explained the nature of the trouble to the child's father, and informed him that nothing save an operation would give relief, to which he consented, as he saw the child was rapidly growing worse, and his suffering was so intense that he required all the care and attention of an infant of six months. The little fellow had been afflicted two years, and was very weak and emaciated from his long suffering. The constant administration of laudanum, for the relief of pain, had impaired his digestion, and we deemed it advisable to put him on preparatory treatment, as his condition did not promise much hope of a successful operation.

I was suffering with an attack of malaria at that time, and left the city to spend a few weeks in the country, with the understanding that I would return and do the operation when the patient's condition was better.

On the 13th of July, I received a postal-card from Dr. Carter, asking me to return and perform the operation. I found our patient had improved, and we made all necessary preparation to do the operation the following day.

Assisted by Drs. Carter and Curry, I did the supra-pubic operation, after Dr. Hunter McGuire's method. The lower portion of the abdomen and generative organs were thoroughly washed with soap and water, and then bathed with a bichloride solution. The bladder was irrigated with boracic acid solution, and then filled with warm water, and a rubber band was applied to the penis to prevent the escape of the water. A rubber bag was introduced into the rectum, and inflated with water, for the purpose of lifting the bladder out of the pelvis, and bring it in contact with the anterior wall of the abdomen. I had no trouble in reaching the bladder below the peritoneum, as the rubber bag did its work admirably. The incision in the bladder was only large enough to introduce the index finger. Two stones, weighing collectively 110 grains, were removed. No

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sutures were put in the wound, as it was left open to facilitate drrinage. The bladder was thoroughly washed out with warm carbolized water, the wound dressed with iodoform gauze, and the little patient placed in bed.

I returned to the country the day of the operation, and left the subsequent treatment to Drs. Carter and Curry. They administered quinine several days, and gave lemonade to render the urine acid. The bladder was washed out every day by introducing a catheter in the penis, and forcing water through it with a hard-rubber syringe, allowing it to escape through the supra-pubic wound.

The patient never had a rise of temperature exceeding one degree, and was dismissed cured in three weeks after the operation, since which time he has been in perfect health, with the exception of an attack of pneumonia.

I consider the supra-pubic operation preferable for children, as the small size of the neck of the bladder makes the perineal operation both difficult and dangerous, while the former is simple and comparatively safe.

Correspondence.

Mercuric Bichloride Solution Locally and Galvanism for Alopecia Areata.

Mr. Editor:—Some time ago I had occasion to treat a case of alopecia areata, the subject being a gentleman æt. 30. The parts involved were chin and cheek. The subject had a luxuriant growth of dark whiskers, except on the parts upon which the disease existed.

I had heard a paper read during the International Medical Congress at Washington, and had seen a favorable notice of it by French dermatologists. The author of this paper directed the application of mercuric bichloride solution to be made to the affected part, and a galvanic current of moderate intensity was used at the same time. The theory having been presented by good authority, that alopecia areata was due to a micro-organism that followed the hair to the bulb, induced the use of the parasiticide. The theory that the galvanic current would transmit the agent

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to the home of the morbific agent, the root of the hair, was reduced to practice, and was added to the treatment on account of the suggestion of Martin, of Chicago, in the paper mentioned.

I am enabled to corroborate Dr. Martin as to results, for my case terminated well. The beard is well and beautifully reproduced, and that too with little interference with the pigmentation of the new beard, compared with other parts of the face which were unaffected.

E. J. BEALL, M. D.

Fort Worth, Tex., January 16, 1891.

Valentine's Meat Juice and Glycerin Valuable as a Nutriment When Externally Applied.

Mr. Editor:—I had as a patient, a two months' old baby, born in the seventh month of gestation. It was very small—weighing after birth, only about 3½ pounds—clothing and all. In this puny condition, the child took cold and appeared to be threatened with broncho-pneumonia. As a result of its inability to cough up the secretions, spasms set in, and life was almost extinct when I responded to the hasty call. Indeed, for some minutes after my arrival, no sign of life could be detected. Yet by vigorous continuous rubbing the body with equal parts of whiskey and water, life was sustained until evidences of it became apparent.

At this stage, I prescribed a mixture of cod-liver oil and whiskey for friction purposes, hoping thereby to furnish some element of nourishment with the stimulant. But by mistake or misunderstanding in the hurry, a bottle of Valentine's Meat Juice and Glycerin was substituted, and the contents were rubbed all over the infant's body. In a few hours, the child recovered enough to swallow, when the meat juice and glycerin was given in doses of one, two and three drops at a time as the stomach would take it. By this double administration of Valentine's meat juice and glycerin—rubbing the body with it and dosing it internally—

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in my opinion, the child's life was saved. In thirty-six hours, it was taking milk as usual from the bottle, and continued to improve until now it is doing well.

Undoubtedly in this case, the skin absorbed enough of the meat juice and glycerin to furnish the requisite nourishment for the time being. And the case demonstrates the fact that the remedy can be administered successfully by the skin.

Yours, etc, E. H. LEWIS, M. D.

Culpeper, Va., January 10th, 1891.

[NOTE BY EDITOR.—If our readers will look up the records, many corroborative cases of the value of meat juice externally and hypodermically could be adduced.]

Proceedings of Societies, Boards, etc

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE, MD.

[Reported by WILLIAM S. GARDNER, M. D., Secretary.]

December, 1890, meeting.

Vice-President Dr. Chas. H. Riley in the chair.

Laparotomy for Immensely Large Dropsical Graafian Follicles—Death.

Dr. Wm. E. Moseley related the following case: Mrs. Maggie G., a light-colored woman, about 30 years of age, twice married, had had two children by her first husband. She suffered much during the past twelve years from dysmenorrhœa; had been unable to do ordinary work. Examination showed the uterus to be retroflexed and firmly bound down, but the character of the adhesions could not be definitely made out. There was an irregular-shaped elastic mass in the position of either tube, diagnosticated as cystic ovaries, together with chronically inflamed tubes. All the pelvic tissues were very sensitive to pressure. There was a deep, double laceration of the cervix, and a lacerated perineum, with very lax vaginal wall, but only slight rectocele.

When the abdomen was opened, the mass on either side of the pelvis was found to be composed of a cystic ovary

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and the corresponding tube, firmly matted together by old organized adhesions, each mass being firmly bound down to the pelvic wall by numerous strong and many more recent adhesions. There were also adhesions to the omentum. The left ovary ruptured before it could be removed. The mass in the right side appeared to be a large hæmato-salpinx, but examination proved it to be an ovarian cyst, into which blood had entered from a ruptured graafian follicle. The adhesions behind the uterus were very broad, strong bands, and were pulled off the uterine walls. All possible care was used to secure the patient against hæmorrhage, and the abdomen was washed out with hot boiled water until the outward flow was practically colorless. A glass perforated drainage-tube was introduced to the bottom of the cul-de-sac, and the incision closed about it. The extreme difficulty of separating the adhesions and the douching prolonged the operation to about an hour and a half.

Although stimulants and artificial heat were pushed, no reaction could be obtained, the temperature never reaching 95° F., and the patient died about six hours after the operation, apparently from shock. At no time was there any discharge of blood, or even bloody fluid, from the drainage-tube. Dr. N. G. Keirle, however, kindly examined the pelvic cavity post mortem, and reported that death was due to hemorrhæge, the exact source of which could not be made out. Dr. J. Whitridge Williams kindly furnished the pathological report, which will be given below.

Dr. Thomas Opie exhibited a placenta he had gotten a few hours ago from a

Case of Placenta Prævia.

The patient was 35 years of age, and had borne one child previously. When he saw her first she was blanched and exsanguined. The blood-flow began three days before, with a loss of a quart, and contined with more or less rapidity up to the time of operation. Her confinement was not expected for two weeks. When first seen by him there were some rhythmical pains and some dilatation. The cervix was dilated with the fingers and cone of the hand; the placenta was detached with a sweep of the forefinger around the cervix, the bag of waters was artificially ruptured, and traction-rod forceps applied. The child was delivered in fifteen minutes without further loss of blood, the placenta coming away simultaneously with the birth of the child. Though the position was occiput posterior, there was no laceration

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of the perineum, and the child was unscathed. Both mother and child were left doing well.

Dr. Opie also exhibited a *specimen of an ovarian tumor*, which he had recently removed. The tumor had developed into the epigastric region, and the tumor was about as large as it would have been at the full term of pregnancy. It took two hours to break up the adhesions, which were very dense between the tumor and the intestines, and between the tumor and the omentum. The second tumor was taken from the pelvis. It was ovoidal in form, about seven inches in length, by five inches high and four inches thick. It was removed entire, and upon section it proved to be a dermoid growth. There was no history of peritonitis to account for the extensive adhesions. The patient had never had a day's discomfort, other than from the size of the cyst. She did not know until four months ago that she had a tumor. The material in the large cyst was colloid. Notwithstanding the extensive adhesion, the length of time consumed in breaking them up, and the injury resulting from the operation, the patient has made a good recovery—this being the seventeenth day after the operation.

Dr. Howard Kelly said that the term colloid is often used in two senses. An incorrect use, describing the yellowish, more or less opalescent, thick, viscid material often found in ovarian cysts; it is employed in such cases as more or less synonymous with gluey. The other use of the term is to describe a rare condition, in which the contents of the cyst are more like calf's-foot jelly, and have a vitreous fracture; they are with great difficulty removed, clinging to everything. This latter is true colloid, and, when found, such tumors are of a suspiciously malignant character. We should limit the use of the word to the latter condition.

He referred to two minor matters of interest suggested by this specimen of placenta prævia. The position which the placenta has occupied in the uterus can accurately be determined by the position of the opening in the membranes made by the passage of the child, inasmuch as the fundus uteri must of necessity be just opposite to this perforation. We can, therefore, by reconstructing the membranes, see just in what part of the uterus the placenta lay. In one of his placenta prævia cases there was no hole at all in the membranes, as he had extracted the dead child through a perforation in the placenta. We can do still more than this in the way of a diagnosis with the membranes By allowing them to be expelled untouched into the bed, and

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carefully observing their position, we can tell as well on which side of the uterus the placenta was attached.

The second point is that we may have placenta prævian hæmorrhage without being able to detect a placental margin, owing to a low attachment of a part of the placenta, near the internal os, below the contraction ring, but not over the hole of the cervical canal. The lower part of a placenta thus attached is separated by the opening up of the lower uterine segment.

Dr. L. E. Neale said that although Dr. Kelly had alluded to a point of some interest, it is of far more practical importance to recognize placenta prævia prior to its expulsion, and as far as he knew, this could only be done with certainty by digital examination. Partial placental separation and rupture of the membranes during labor, in cases of placenta prævia, was outlined by Mariceau as early as 1668, but was fully described by Purgas in 1759. He saw nothing in the history of the present case, as related by Dr. Opie, that contradicted the method of Braxton Hicks, a method that up to the present time had given by far the best results—viz., 4½ per cent. maternal mortality. If this method, when practicable, could be performed earlier than delivery by any other method, and was not difficult and gave the best results, why not have applied it in the present case?

Dr. Wilmer Brinton asked why Dr. Opie objected to the tampon in cases of placenta prævia? He thought no arbitrary law could be applied.

Dr. Opie said, in closing the discussion, that results of operative procedure depended largely upon the skill and familiarity of the operator with the special operation resorted to. In the first case of placenta prævia he had attended he had turned, and lost both mother and child. With rapid dilatation and forceps he feels that he has command of the situation; and having resorted to that method repeatedly, has gained greater skill and does better work. While Dr. Neale might do better by some other method, he is fully satisfied that he does best himself with the forceps. He is opposed to the use of the tampon because it conceals what is going on. It is not best to wait for pains. He is in favor of rapid dilatation and delivery in placenta pains, in puerperal eclampsiæ, and in abortion. To put in a tampon and go away is hazardous. The tampon is of very little help in hæmorrhage.

Dr. Howard A. Kelly read a paper upon the

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Palpation of the Normal Uterine Appendages,

(Published in full in the February number of the *American Journal of Obstetrics*).

He stated that the normal uterine appendages could always be palpated. There are two avenues of approach—by the vagina, and by the rectum—and three ways of utilizing these avenues. First, with one hand; second, with two hands employed bimanually, either by vagina or rectum; and third, the trimanual method, by vagina and by rectum.

First, the examination with one hand is unsatisfactory, and the ovary cannot even be felt unless abnormally displaced downward into the recto-uterine pouch.

Second, the success of the bimanual examination depends upon the downward pressure with the external hand displacing the abdominal walls in the direction of the ovary to be palpated, and thus affording a resistant plane against which the ovary can be felt by the internal hand. The internal hand must be used to invaginate the perineum, which is thus displaced upward into the pelvis. This invagination gives the examining finger, even though it be a short one, the necessary length. One, often even two inches, are thus gained to the palpating finger. Care must be taken in making the pressure necessary to produce this invagination not to stiffen all the muscles of the forearm, thus impairing the tactile sense.

The rectum is, of all others, the best avenue for approaching the structures lateral to the uterus, affording, as it does, a wide open channel throughout the whole length of the pelvis.

Where the structures cannot be reached at once through the rectum, they are brought within easy touch by bringing the uterus and ovaries into an *artificial retroposed* anteflexion, the mechanism of which was carefully described by diagrams. He had, in this way, palpated fibroid tumors on the posterior surface of the uterus near the fundus, not as large as a pea.

Third, the trimanual examination is conducted either by the vagina, or by the rectum and vagina, assisted with the hand above. The peculiarity of this method is an *artificial descensus uteri.*

The uterus is grasped with a pair of bullet forceps, and drawn downward until the cervix is seen at the vaginal outlet; and while an assistant holds it in this position, the gynæcologist uses his hands bimanually. To obviate the employment of an assistant, Dr. Kelly has invented an in

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strument, which he calls the corrugated tenaculum, flattened and roughened so that it can be readily held between the last phalanges of the third and fourth fingers and the ball of the thumb, while the index finger of the same hand, assisted by the abdominal hand above is engaged in making a vaginal or rectal examination.

By one or the other of these methods the uterus, broad ligaments, and ovaries and tubes, are within reach of a most thorough and searching examination, revealing at once the smallest abnormalities.

Dr. William P. Chunn said that when speaking of what should be found, or can be found at an examination, it is necessary to consider the circumstances under which the examination is made. Office examinations are the most usual, and all the facilities are not usually at our command, and the circumstance should be specified and taken into account. Certain advantages in methods give certain advantages in results. Of course when the woman has no ovaries, or when the ovaries are not in the pelvic cavity, they cannot be palpated.

Dr. Hunter Robb agreed with Dr. Kelly that the normal ovary can always be palpated under an anæsthetic; and also that, in a large number of patients, the ovary can be outlined without anæsthesia. Four years ago Dr. Kelly taught me the method of examining the ovary by invaginating the perineum, and I can testify to its utility. This lengthens out the examiner's finger, and thus enables the practitioner who has a short finger to accomplish it with almost the same facility as a longer one. The corrugated tenaculum devised by Dr. Kelly may be used to advantage with nulliparous patients to define the uterus and its appendages still further. No one, of course, would think of using it in inflammatory conditions of the pelvic cavity.

Dr. B. B. Browne said that he had listened with much pleasure to Dr. Kelly's paper, and congratulated him upon the admirable manner in which he had systematized these valuable methods of pelvic examination—methods which most of us had been using in our gynæcological practice for several years. He generally preferred the use of two fingers in the vagina, as he could thus make a more satisfactory examination of the tubes and ovaries than with one finger. In many cases, a more accurate idea of the adhesions can be had by getting the finger above the ovary and fixing it between the finger and the spinal column. Pulling down the uterus aids diagnosis very much.

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Dr. Opie said that there were few objections to Dr. Kelly's paper, but it seemed that the elbow on the hip is incompatible with delicacy of touch; the law, as expressed by Martin, being—"The more lightly the parts are touched the easier the goal is reached, and the less the force that is employed the more distinctly things are felt." He thinks it a cruel sort of thing to drag an organ out of its position, and would like to know how much displacement can be made with the tenaculum without producing dangerous trouble; for example, cellulitis, metritis, and injuries to the periuterine tissue. He had met a number of cases in which he had not been able to make out the ovaries. Dr. A. Martin says he can palpate normal tubes, but Dr. Opie has never been able to reach that degree of perfection.

Dr. Neale referred to the possibility of tracing out the ureters through the anterior vaginal wall, as had been demonstrated to him by Dr. Kelly at the Hopkins Hospital Clinic. He had no doubt that, in a large majority of cases, the normal ovary could be displaced out of its normal position and palpated or touched with ease through the vaginal walls. He believed that a great deal of difficulty in an ordinary gynæcological examination was due to the fact of neglecting to empty the bladder, or to employ the rectal touch.

Dr. H. P. C. Wilson said there were a large number of women in whom he was sure he could not palpate the ovaries, and he was doubtful if any one could do so. The uterus is often found fixed in the pelvis as in a mass of putty, and no definite outlines can be made out. In other cases, the abdominal walls are from two to four inches thick with fat, and in such cases he had failed to find the ovaries.

Dr. J. Whitridge Williams said that he could certainly feel the ovaries in four cases out of five, and that he had succeeded occasionally in finding the ureter.

Dr. Moseby said that the old teaching is that the ovaries cannot be palpated in their normal position. When an ovary can be found by an ordinary examination its location may fairly be considered as abnormal. If Dr. Kelly's idea, that all men who cannot make out normal ovaries should be thrown out of the specialty, should be enforced, a large number of experienced and thoroughly informed specialists would be excluded from practice. It is practically impossible io examine every patient thoroughly enough to make out the normal ovaries in office examinations. In dispensary, and, more especially, in hospital practice the case is very different.

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Dr. Browne thinks that the cases in which the ovaries cannot be felt are the abnormal cases. If the symptoms point to an examination of the ovaries, they can be made out; but if necessary, an anæsthetic should be given.

Dr. Kelly said that he examines every case coming to him vulva to ovaries, making a special note of every important organ. When the patient complains of persistent pelvic pain, the examination is never considered complete, or the diagnosis sure, without a special note as to the condition of the ovaries. He has been asked about examining the ureters by palpation. They can be felt in almost all cases, being distinctly traced from the anterior part of the pelvis back to the side of the uterus. Pressing upon a diseased ureter causes a desire to pass water, if not irresistible. He proves that this structure is a ureter by catheterizing it. The catheter can be felt through the vaginal wall, outside the bladder, in the ureter, and the urine collected as it comes down from the kidney, drop by drop. The Fallopian tube can often, but not always, be made out.

The amount of displacement of the uterus, which can be made without injury, is considerable. In normal cases, it can easily, and without harm or pain, be brought down to the vaginal outlet. When there is fixation, gentle traction can be made until pain is felt. In these cases, I use traction with the corrugated tenaculum, and then, pushing up the fundus with the finger, practice massage, stretching the adhesions. I am sure that the downward traction to the vulvar without pain never does any harm.

Dr. J. Whitridge Williams' remarks upon the

Pathological Experiments

Submitted to him by Dr. Moseley, Dr. Wilson, and Dr. Opie.

The specimens submitted by Dr. Moseley are of considerable interest, and consist of the uterine appendages from both sides. The specimen from the left side consists of the Fallopian tube, ovary, and part of the broad ligament. The tube was completely occluded at its fimbriated end, but otherwise presenting nothing abnormal except numerous small adhesions. It contained a very small amount of dirty yellow fluid, consisting of columnar ciliated epithelial cells and numerous disintegrated cells. The ovary was considerably torn, and covered by very dense adhesions, while the broad ligament presented nothing of note. The specimen from the right side was an irregular mass of tissue about 5x4x1½ cm., consisting of the tube and ovary imbedded in

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dense adhesions. At first glance, the mass appeared to be composed of two parts, a larger solid anterior portion covered by dense adhesions, and posterior to it a cystic structure about 4x1½ cm. in size. This had a bluish color, thin wall, and was intimately connected with the rest of the mass. Imbedded in adhesions, a piece of the ampullar end of the tube was found which could be traced for about 4 cm., and then lost itself in the mass, and appeared to have no connection with the above-mentioned cystic portion. The main portion of the mass on section was shown to be composed of ovarian tissue, which was covered and completely hidden from view by very dense adhesions. It contained two tolerably fresh corpora lutea, about 1½ cm. in diameter. The larger of these corpora lutea communicated by a small opening with the cystic portion above mentioned, which contained a thin reddish watery fluid containing blood cells. On cutting open this cystic portion, its walls were found perfectly smooth, with several smaller cysts projecting into it. These varied in size up to 2 c. in diameter, and were filled with a clear watery fluid, and arose directly from the ovarian tissue. On examining the scrapings from the walls of the cysts, I found that they were lined by a layer of almost flat cutoidal cells, which were distinctly ciliated. These cysts could not have originated in the tube, as was readily demonstrated by their arrangement in relation to the larger cyst, and by the lining epithelium, which was totally different from that of the tube. Their smooth interior precluded the idea of a ciliated papillary cystoma; and the only probable thing for them to be was dropsical Graafian follicles, which had been prevented from rupturing by the dense adhesions covering them, and so attained their large size. The fact that they were lined by ciliated epithelium is not at all opposed to this supposition; for cilia have previonsly been found in the dropsical Graafian follicle, as was shown by von Velits, of Budapest about a year ago; and, as I found, altogether independently of him, last spring. But as yet I have not made sufficient number of observations to assert that all dropsical follicles are lined by ciliated epithelium. The blood in the large cyst, in all probability, came from the corpus luteum with which it was connected. The adhesions about the ovary were particularly dense and resisting. The diagnosis from the specimen in pelvic peritonitis, with adhesions binding down the adnexia on both sides, particularly the right side, with several very large dropsical Graafion follicles.

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The specimen submitted to me by Dr. H. P. C. Wilson was a small myoma about 3 cm. in diameter, and bore on one surface a piece of vaginal mucous membrane the size of a two-cent piece. The tumor was submitted to me to decide whether its origin was from the anterior fornix or from the uterus itself. Sections made through the tumor and the vaginal mucous membrane readily showed it to be a myoma which was separated from the submucous tissue and epithelium by numerous bands of non-striated muscular tissue. From the presence of muscular fibre between the tumor and epithelium, I think we are justified in concluding that it was not of vaginal origin. Were it of vaginal origin, it should arise from the submucous tissue and be immediately adjacent to the epithelium and not separated from it, as it was in this case by muscular tissues. Force is lent to this conclusion by the fact that vaginal fibroids are very rare indeed, and many of the reported cases, especially fibroids from the anterior fornix had their origin in the anterior wall of the uterus instead of the vagina.

The specimen submitted by Dr. Opie was a greatly hypertrophied posterior lip of the cervix, which measured 5 cm. in length and 2 cm. at its broadest part. Microscopically, it was found to consist of almost normal cervical tissue. with only a very slight increase of the connective tissue. Except at its cut surface, the entire mass was covered with the usual stratified epithelium.

Generally speaking, we may distinguish two forms of hypertrophy of the portio-vaginalis—follicular and diffuse or simple hypertrophy. The first form is due to an increase in the number and size of the cervical glands, with frequent retention of their contents, and is quite frequent, but never attains a very great size, and is readily distinguished by its nodular appearance. The diffuse or simple form of hypertrophy is far more important. In this, there is a general increase in all the elements that compose the cervix, though there may be a slight increase in the amount of connective tissue, as there was in this case.

Antikamnia in La Grippe, Neuralgia, etc.

Drs. J. W. Hicks, of Orlando, Fla., A. P. McConnell, of Port Luddington, Mich., John J. Rigg, of Montrose, Iowa, Hy. Lindsay, of O'Fallon, Mo., etc., speak of "Antikamnia" in 5 to 8-grain doses as giving excellent results in relieving the pains of la grippe, neuralgia, etc.

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Analyses, Selections, etc.

Obstetrical and Gynæcological Notes by E. S. McKee, M. D., of Cincinnati, O.

Extra-Uterine Pregnancy. This subject was brought before the Obstetric Section of the International Congress at Berlin, by Leopold, of Dresden, and was handled in the author's usual thorough manner. A number of specimens representing various forms of ectopic gestation were presented. One case was ovarian, another tubal; both came to the ninth month without rupture. He also showed a lithopædion resulting from ovarian pregnancy and carried 25 years before removal. Several others were cases in which rupture had taken place.

The Silver Lines of Pregnancy was the subject of a very interesting paper by Dr. W. F. Langdon, of Cincinnati, at a recent meeting of the Cincinnati Medical Society. The doctor says these lines, which are usually considered the necessary concomitants of pregnancy, are not cicatricial in their character, but are due to a rearrangement of the tissues by stretching.

"*Evil to him who evil thinks*" is a maxim which should be ever in the minds of medical men and especially of obstetricians and gynæcologists. We should speak the truth boldly. Call black black, and fear not to say the truth, lest some low minded person try to make you out as low as himself. Science should know no obscenity. As Heinrich Heine said, "we are all naked under our clothes," and what is the use of denying it or abusing people who say we are. Humanity is a whited sepulchre; we all know it, and we should treat medical matters in a truly scientific manner, dealing with facts not fancies. Americans are the most modest and the most impolite people in the civilized world. True ideas of politeness differ, as do ideas of beauty. A Cincinnati specialist said to me the other day, "I have just had a beautiful case in my clinic of stricture of the rectum in a boy." This boy's rectum was just as beautiful to him as the young lady's cataract so well described a few days later by the colleague of the rectal surgeon. The American young lady and gentleman will spend the whole day at the exposition and both suffer untold (for they wouldn't mention it) misery, rather than excuse themselves and relieve their bladders and recti, as would the young lady and gentleman in France. The Americans may be more

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modest than the French, but the latter show more sense. I well remember reproving a young lady but recently from France, and a novice in the English language, from saying "leg" in company, telling her she must say limb. A few minutes after she called her arm her limb. I told her that was unnecessary, she might say arm but not leg. She argued that if her leg was her limb her arm was also her limb; that one member was just as useful, honorable and well named as the other. She wound up with the conclusion that neither her arms nor her legs were her limbs, for she was not a tree, neither was she a block head. True she had a trunk, so had the elephant; yet he was not a tree, and his legs were legs and good big ones at that. The same young lady refused to call a bull a cow, as did some of her feminine American associates. As to that harmful, false modesty which exists between mothers and daughters, in this country, through which the daughter is kept in ignorance of certain changes and experiences, it is so familiar as not to demand discussion here. I once knew a young girl who flooded for six months and nearly died, studiously keeping the fact from her mother because she did not know what it was, had never heard, and supposed it was bad blood, which must come from her and was something to be very much ashamed of. Generally we will find those who accuse scientific men of obscenity are rotten to the very core.

Exercise in Pelvic Diseases of Women is the subject discussed by Dr. J. H. Kellogg, superintendent of the Battle Creek Michigan Sanitarium. The doctor, from his immense experience in the treatment of diseases peculiar to women, is quite capable of speaking on this subject. In his observations he has found that the defective muscular development is a prime factor in the etiology of a large number of the pelvic disorders to which civilized women are subject. The mode of dress commonly found among civilized women is a cause of deficient and asymmetrical muscular development. He has found this dress productive of such disturbances of the relations and functions of the abdominal and pelvic viscera, as lead directly to the production of functional and structural changes in the uterus and its appendages. That properly graduated exercises, in his opinion, with adjustment of clothing, will permit free and unrestricted movements of every group of muscles in the body, are of great importance in the management of a large class of pelvic disorders.

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The Constant Galvanic Current in Gynæcology was the subject discussed by Dr. Apostoli, of Paris, at the International Congress, at Berlin. The following points are gleaned from a copy of the paper sent me by the author. The constant galvanic current finds its principal indication in endometritis and fibroma. It is sovereign against amenorrhœa, dysmenorrhœa and menorrhagia, a powerful agent in arresting the evolution of benign neoplasms, and in aiding in the absorption of peri-uterine exudates. It has a very salutary resolvent action in many peri-uterine phlegmasiæ and in certain catarrhal ovaro-salpingites, but is inefficacious and even injurious in high doses, especially if the intra-uterine pole is negative, against the suppurative phlegmasiæ of the appendages. A valuable means of diagnosis, in determining the existence and nature of unknown or merely suspected peri-uterine liquid accumulations, is the invariable intolerance of the current; this will increase with the inflammatory state of the appendages. The fundamental basis of Apostoli's method are high galvanic applications above 50 milliamperes. The intra-uterine applications must remain the preferable method, according to the author, because it utilizes the maximum of the current and the antiseptic action of the positive pole; because it conduces to the diminution of pain, and assures greater efficacy in increasing the applied intensity and of the induced sanguineous irrigation. Vaginal galvano-punctures aid the intra-uterine therapeutics in better localizing the galvanic action. The innocuousness of his intra-uterine therapeutics is established by numerical statistics collected all over the world, and his own especially. From July, 1882, to July, 1890, he has made 11,499 galvanic applications, viz: 8,177 positive intra-uterine galvano-cauterizations, 2,486 negative ditto, 222 positive vaginal galvano-punctures, 614 negative ditto. He has treated 912 patients, comprising 531 fibromata, 133 simple endometrites and 240 endometrites complicated with peri-uterine phlegmasiæ, 313 fibromata, 70 simple endometrites, 163 endometrites complicated were seen in clinique; 218 fibromata, 63 simple endometrites, 85 complicated endomentrities were treated in office or city. He has had 3 deaths attributable to operative errors, 2 galvano-punctures, one for sub-peritoneal fibroma, the other for an ovaro-salpingitis, and one galvano-cautery for ovarian cyst mistaken for a fibroma. He has seen 30 cases of pregnancy occur after intra-uterine galvanic applications. The paper was very well received and extensively discussed.

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Painful Menstruation in Virgins is a subject well handled by the well-known pediatrician, Dr. I. N. Love, of St. Louis. This is a disease which is on the border line between gynecology and pediatrics, and the tie between women and children is a very close one anyhow. Dr. Love does not believe with many of the workers in the field of diseases of women, that the ills which female flesh is heir to, can generally be charged to the reproductive organs. Cases of painful menstruation, especially in virgins, seriously burden the conscientious physician. In the many cases which have come under his care, he has always felt that every therapeutic measure should be exhausted before local means should be instituted; in fact, in nearly all cases in young girls special treatment should be avoided. The doctor has obtained gratifying results from Ponca Compound, one tablet every four hours.

The Absorption of Drugs from the Vagina, is the subject handled with his usual clearness by Dr. A. Lapthorn Smith, of Montreal. The doctor has been employing the local administration of mercury in doses of 1-10 grain every three or four days on tampons of boro-glycerin during the last two years, about five hundred times in fifty cases of vaginitis, endometritis, salpingitis, ovaritis, pelvic peritonitis, and he feels sure that the duration of treatment before relief has been obtained, has been very much less than when before this method was adopted. He is unable to say exactly how much of his success is due to the bichloride alone, for the simple reason, that at one time or another in the treatment of every case, he employed other remedies and measures in addition to it. One of his reasons for attaching so much value to the bichloride of mercury employed in this way is, that nearly every one of the diseases above mentioned is due more or less directly, to septic absorption, and that the more or less constant production of septic matter is necessary to keep up the disease. He has found this absorption taking place when using iodoform, iodine, and corrosive sublimate. He was lead to this practice by noting the absorption which takes place in injections, post partum, of bichloride, and thinks it occurs also to a less degree under other conditions.

The Second Edition of Diseases of Women, by Dr. A. Martin, of Berlin, and translated by Dr. E. W. Cushing, of Boston, is now before the profession. The distinguished author who all who have seen him operate will remember is well known for his erudition and dexterity with the knife and needle. It is doubtful if another operator so rapid and at the same

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time so safe exists. The author has, in this latest edition, inserted the latest improvements and advances in this art during the two years since the former edition. Gynæcologists are largely indebted for the free use of operative measures in prolapse of the uterus, the introduction of vaginal hysterectomy for cancer, and the correct pathology and operative treatment of salpingitis, to Dr. Martin, who is always an early advocate and a brilliant operator. In Dr. Martin we find that excellent combination, sound pathological knowledge, clear operative directions, and judicious advice as to therapeutic measures. Also this work is especially beyond and above others of its class, in the very excellent and numerous illustrations. The micro-photographic plates all represent the results of the pathological and photographic work of the translator, Dr. Cushing, whose appendix of 136 pages and large number of illustrations adds not a little to the value of the book. Many of these illustrations are borrowed from that well known journal, the *Annals of Gynæcology*, which has made this department reach such perfection.

The Southern Surgical and Gynæcological Society's Transactions Vol. II, giving the work of the Nashville meeting, makes a handsome volume of 379 pages, which is well executed by the well known printer, Wm. J. Dornan, of Philadelphia, who is now doing nearly all of the publishing of *Transactions* for various medical associations. What Civilization is doing for the Human Female was the subject so well handled by Dr. A. Lapthorn Smith, of Montreal. Maury, Roberts, Wathen, McGuire, Johnstone, Hadra, Englemann, Mathews, Brown, Lydston, Briggs and Johnson were among the authors of articles.

Appendicitis—the Physician's and the Surgeon's Relations Thereto.

In the discussion of this subject before the Medical Society of the State of New York, just held (Feb. 3–5), Dr. A. Vander Veer, of Albany, N. Y., said that, as to the classification of the subject, the pathology, the indications for early laparotomy, the technique of operative interference, the indications, etc., for operation during the quiescent stage of appendicitis, papers have been presented by surgeons known everywhere as the ablest operators. The amount of literature accumulated even during the past five years, upon appendicitis, has been very great. The word itself, presented by Dr. Fitz, has helped much to simplify cases originating about and within the appendix. Dr. Vander Veer's experi-

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ence, now considerable, shows that these cases are being studied by the physician, many of whom never do operative surgery, with greater care and determination to reach correctness in the early diagnosis. It is plain, he thinks, that the good results following the present treatment of appendicitis has been largely due to the wise and judicious advancement made by the operative surgeon; yet it is to be said to the credit of the physician, that he has studied their ways and methods carefully, and has appreciated the importance of an early and correct diagnosis; still much is to be accomplished. He would say then:

Firstly. That the care of cases of appendicitis, so far as the physician is concerned, consists in his early and prompt recognition of the case. That abdominal surgery has now advanced to that point, and reached such a degree of success, that by the application of the methods of exclusion, the physician is able to narrow down the possible condition of his patient to such a point that sharing the anxieties of the case with the operative surgeon becomes an immediate and imperative necessity. Surely every physician has reason to feel greateful to such surgeons as Edebohls and McBurney for bringing to his attention such plain and useful diagnostic points as they have. There is no excuse for any physician, now in full practice, for not knowing and fully understanding what is meant by "The McBurney point."

Secondly. When called, the responsibility rests largely with the surgeon, to further aid, or decide as to diagnosis, and as to the necessity of immediate operation. If it is once decided to operate, then the technique of the operation and the care of the case for a certain period, devolves entirely upon the operating surgeon. We know from experience that these cases so often occur among a class of people where the anxiety is of the greatest.

Thirdly. At no time after the operating surgeon is called in and operates, should the physician and he be separated in their care of the case. The watching of the wound rests with the surgeon. Should he be in doubt as to the necessity of an operation, he may be impressed more positively in the direction of the necessity of doing it later, if he sees the patient again at the end of twelve or twenty-four hours, or more or less frequently.

Fourthly. That the physician has yet much to grasp in the recognition of these cases, as cases of great anxiety, there can be no doubt. A case of this kind occurred recently in a neighboring city in which the operating surgeon was

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called in at the end of the second day's illness of the patient, and after careful examination said, "that he had no doubt of the condition being one of appendicitis," and when going over the symptoms carefully, the physician said, "when we compare this attack with one the patient had some months since, I am confident that they are both of the same nature," thus, confirming not only his own, but the surgeon's (Dr. Hodgeman, of Saratoga), diagnosis and opinion of the necessity of an immediate operation, which was done. The appendix was found full of pus just ready to escape. The patient's life was saved. Had the attending physician waited another twenty-four hours to call in the operating surgeon, it would probably have proven fatal.

Fifthly. There is a great duty resting with us as operative surgeons in endeavoring to classify our cases of abdominal surgery in such a way as will make it clearer to the students and the practicing physician, to recognize these cases; and then to endeavor to bring before the older members of the profession an array of statistics, a percentage of recoveries that will impress them with the importance of prompt operation in these cases. To illustrate: Not long since he was called to see a case in which a younger physician, who had seen the case casually, had suspected appendicitis and suggested the propriety of an operation to the older practitioner, in attendance, and who said in reply, "well, granted that it is that, and in which I believe you are correct; but have you ever known of a case that recovered after an operation for removal of the appendix?" This has been too often the experience of our middle-aged and older practitioners. Therefore, Dr. Vander Veer repeats, that it is our duty to endeavor to bring this subject, by constant study, by repeated discussion in our societies, by careful observation of our pathological specimens, to that point of perfection that we may be able to convince the pure, upright, honest and intelligent physician that the operative surgeon can help and save these cases, when presented to him in time for treatment.

Sixthly. The mutual care of these cases must consist in a greater, closer watching of early symptoms by the physician, and in a greater degree of confidence in the skill of operating surgeons. The care of these cases, as between physician and surgeon, must be brought to that plane where we shall meet with fewer cases of septic conditions when operating, and where the symptoms of collapse, such as cold hands and feet, husky voice, sub-normal temperature and like conditions have not been reached.

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Tumor of Centrum Ovale Diagnosed by Motor Paralysis and Paralysis of Muscular Sense.

Dr. Landon Carter Gray, of New York city, read a paper during the session of the Medical Society of the State of New York, just held (Feb. 3–5), upon a tumor of the centrum ovale, causing motor paralysis and paralysis of the muscular sense, and at the autopsy a round-cell sarcoma about the size of a hickory-nut was found about one-fourth of an inch beneath the cortex at the junction of the leg and arm center of the posterior central convolution. The patient was a young man of 38, who was brought to Dr. Gray from Richmond, Va., by Dr. I. H. White, two weeks after motor paralysis had begun in one lower extremity. As there was a large tumor in Scarpa's triangle, and as an angioma had been removed some time before from the popliteal region, Dr. Gray was led to believe that the symptoms were caused by an intracranial tumor. There was motor paralysis of one lower extremity, and paralysis of the muscular sense, slight headache, but no mental symptoms whatsoever. The patient was advised to go home and settle up his affairs, and to have trephining done if he grew worse. Two weeks afterward he was brought to New York, and was found to have a motor paralysis and a paralysis of the muscular sense also of the upper extremity on the same side with the paralysis that already existed. The patient was gradually becoming comatose. The headache had become very much worse. There were no changes in the optic disk, very slight impairment of the tactile sense, and no motor or sensory paralysis or tremor of any kind other than that mentioned. The patient was operated on by Dr. J. A. Wyeth, but neither by palpation or an exploring needle could the tumor be found. Two days after the operation death ensued, and at the autopsy the tumor was found as above located. Dr. Gray then went over the histories of cases showing the localization of the muscular sense, and showed that this case was the most significant one on record in the limitation and the rapid growth of the lesion as indicative of the location of the muscular sense.

Three Diagnostic Signs of Melancholia.

During the session of the Medical Society of the State of New York, just adjourned (Feb. 5), Dr. Landon Carter Gray, of New York, N. Y., read a paper upon the "Three Diagnostic Signs of Melancholia," it being the second com-

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munication upon this subject which he had made, the previous one having been made in the summer of 1889, to the American Neurological Association. He read histories of sixty cases in which there were present all three or two of the following symptoms, viz: (1) Melancholia of a peculiar type, (2) insomnia, and (3) a peculiar sensation in the back of the head and neck, to which he gave the generic name of the "post-cervical ache." The melancholia was a fixed and organic melancholy indicated by a sad and slightly suspicious facies, slight dullness of the mental reflex, and often accompanied by melancholy or terrifying delusions and hallucinations—rarely by illusions. The insomnia varied from almost complete loss of sleep, persisting for months, to a loss of one or two hours of the usual length of slumber. The post-cervical ache consisted of a sensation that was variously described by different patients as a tingling or numbness, or a hysterical feeling, or positive aching, or actual neuralgia, and is felt somewhere between the back part of the vertex and the lower part of the neck, or sometimes extending throughout the whole of this region, being most frequently found in the occipital region. Dr. Gray then went on to state the points of differential diagnosis as offered by this triad of symptoms between true melancholia and neurasthenia, hysteria, ordinary insomnia, occipital neuralgia from various causes, etc. And as slight cases of melancholia are *per se*, very frequently indistinguishable from other neurotic disorders, he thought this means of differential diagnosis would prove to be of invaluable service, not only in diagnosis, but also in prognosis and treatment.

Treatment of Pelvic Inflammation in Women.

Dr. L. S. McMurtry, of Louisville, Ky., by invitation, read before the Medical Society of the State of New York, at Albany, February 4th, 1891, a paper on this subject. He said that upon the pathological doctrine accepted must rest the rational treatment of any given disease. Now that operative surgery daily explores the peritoneum, the unsatisfactory teachings upon this subject are fast being replaced by a practical appreciation of the true pathological process and resulting lesions. *Pari passu* with this advance, the radical treatment of tubo-ovarian diseases as the focus of pelvic inflammation has grown in estimation.

Dr. McMurtry accepts unreservedly the teachings of Bernutz, announced in 1862, confirmed by Polk, in 1886,

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and demonstrated by modern pelvic surgery. Pelvic cellulitis is a rare condition, but pelvic peritonitis is common, and recurs often with sequelæ so dangerous that it is the most important and constant of the affections encountered in gynecic practice. Time and again has Dr. McMurtry demonstrated by abdominal sections that the hard masses within the pelvis above the lateral fornices, hitherto described as pelvic cellulitis, are in reality peritonitis with exudation surrounding chronically inflamed tubes and ovaries. As a rule, this inflammation begins in the membrane lining the uterus, and by continuity spreads to the mucous surface of the Fallopian tubes. The tubes are are not provided with ready means of expelling increased secretion externally, and the discharges accumulate and distend them. Leakage results through the fimbriated extremity of the tube into the peritoneum. Endometritis and endo-salpingitis are the primary steps. Nature at once circumscribes the inflammatory process by a limiting wall of inflammatory exudate. The process thus limited may remain quiescent indefinitely, the tubes distended, the fimbriated ends sealed, and a mass of exudate enclosing tube and ovary. As time goes on the exudate becomes more dense and organizes into firm bands of false membrane. With the menstrual ebb and flow its vessels enlarge and persistent contraction goes on. From the time the peritioneum is involved, pain is a conspicuous symptom, and as contraction progresses this pain is intensified. The imprisoned organs undergo degenerative changes, their functions are impaired or destroyed, the woman is an invalid, and may at any time develop fatal general peritonitis by rupture of one or both distended tubes. Dr. McMurtry here showed the tubes he removed from a patient suffering with suppurative peritonitis from a ruptured tube, the sequel of gonorrhœal inflammation. The tubes were distended with pus, and one had ruptured into the general peritoneal cavity.

The etilogy of the inflammatory process here considered—endometritis, salpingitis and peritonitis—will in a great majority of cases be easily traced to infection. The peritoneum is an immense lymph-sac, and readily takes up infectious material. The traumatisms of parturition, either at term or prematurely, with the injections of the unprotected puerperal state, gonorrhœa, the introduction of unclean instruments, and the injury and exposure incident to many minor gynæcological operations, are the principal causes of the disease under consideration. The

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severity of the inflammatory process, and the degree of recovery vary. An attack may terminate in exudation of plastic lymph, or in purulent effusion. Recovery may occur with damaged tubes and ovaries imbedded in plastic exudate and bound to the uterus and other adjacent organs. Such a recovery is a very imperfect one. The attack may end in pyo-salpinx, with the ever present danger of rupture and general peritonitis. In some cases the inflammatory process may quickly develop into general septic peritonitis. It may be a simple catarrhal inflammation, terminating in slight adhesions and doing no material damage to the intra-pelvic structures. Such are the cases which make good recoveries under palliative treatment.

In Dr. McMurtry's observation, the relation of an attack of gonorrhœa, of an abortion or miscarriage, or labor at term, when necessary precautions to prevent infection are disregarded, or of treatment for "womb disease," to pelvic inflammation, is always apparent. The violence so common in probing the uterus, the too frequent and forcible use of the curette, and the unnecessary operations upon the cervix, open up the avenues of infection in many cases of peritonitis.

From the view presented of the pathological process, it is clear that we are dealing with inflammation and its results in the Fallopian tubes, with or without ovaritis and peritonitis, the grade varying from a simple catarrh, through the several grades of salpingitis and circumscribed peritonitis with exudation of lymph matting together adjacent parts, false membrane and effusion of serum, on to suppuration and general systemic infection and death. Under treatment by warm sitz baths, rest, the hot douche, massage, counter-irritation, and local depletion, recent pelvic inflammation with extensive but unorganized exudation may disappear and recovery ensue. Especially may this obtain under the use of saline purgatives, by which an indirect method of peritoneal drainage is established. Yet in more severe cases the exudate may become absorbed in most part, but the appendages are damaged, pelvic peritonitis is prone to recur, and the patient is not permanently relieved. If the ends of the tubes are sealed, if the tubes are filled with serum, blood or pus, the trouble will persist in spite of all palliative measures of treatment. When the symptoms point to the formation of pus there is no excuse for delay to dally with palliative measures. The one supreme

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indication is incision, evacuation, irrigation, drainage and removal of disintegrated structures.

Non-surgical treatment in the milder grades of inflammation may remove the products of inflammation deposited in the surrounding peritoneum, but fail to cure the diseased appendages. The indications are not positive for surgical interference, since life is not endangered, but these women are unfitted for the duties of life, are confirmed invalids, and several have acquired the opium habit. They are improved by the treatment, but are not cured.

When a patient presents the history of recurrent attacks of pelvic inflammation, it is at once indicative of leaky tubes. The only treatment to cure, is to remove the diseased appendages by abdominal section.

Some Notes Bearing on the Administration of Iron.

Dr. John Aulde, of Philadelphia, Pa., says (*N. E. Med. Monthly*) that although iron is highly esteemed and largely used as a tonic, yet so frequently the patients object to it, owing to idiosyncrasy or fancy, that it is not wholly the ideal hæmatinic. He offers no apology, therefore, in offering a comparatively recent preparation, which is free from some objections that have been urged against many of the iron preparations now in use.

Besides reduced iron, we use ferric and ferrous preparations, the latter being more mild, less astringent, and free from objections to the ferric salts—that of coagulating albumin. Lethal doses of the ferric salts used intravenously, in experimental investigations, cause almost immediate paralysis of the central nervous system, fall of blood pressure, and death. Although the perchloride, when thus used, causes instant death by coagulation of the blood, it does not act in this direct manner when introduced subcutaneously; the nerves are unaffected, but at the points of elimination inflammatory action is set up, *e. g.*, the kidneys, liver, and intestinal mucous membrane show more or less effect. Absorption takes place as a peptonate or albuminate, but it is taken up so slowly that no appreciable result follows, unless, as just stated, used intravenously or subcutaneously. Absorption takes place more rapidly in catarrhal conditions of the intestinal tract—a fact to be borne in mind when exhibiting large doses, which cause gastro-intestinal catarrh. Small doses do not have this effect, nor does the metal appear in the urine, such as may be observed after the ingestion of large doses. It will be inferred from

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the foregoing that small doses of a soluble preparation of iron will be assimilated without causing derangement of the alimentary tract, and in this way the secondary effects, *i. e.*, the deposit of the metal in the system, may be avoided.

The fact should be kept constantly in view, that metals have a poisonous action upon nerves, nerve centres, muscles, and upon all glandular structures; and as iron is a reputed hæmatinic, much harm may result from its injudicious employment, as there are evidently certain toxic effects following the long continued use of insoluble preparations. This rule applies especially to all insoluble iron preparations, and it is but reasonable to assume that, whatever harm has been done through this means, may have escaped attention, because few physicians are likely to investigate the presence of factitious disease. Another factor which has contributed to lessen these evils, is the slow process of absorption.

The foregoing observations apply with equal force to the effects of the drug upon the circulatory apparatus. While copper is an active agent in causing contraction of the blood vessels, iron produces slow contractions, showing that it is less irritant (stimulant) to the nervous system. This may possibly be accounted for on the hypothesis that iron is a normal constituent of the blood. Whether this effect is due to irritation (stimulation) of the vaso-motor nerves, central or peripheral, or to a direct action upon the muscular walls of the blood vessels, is a question. His impression is, that through the influence of the medicament upon the nerve cells the large doses, comparatively, arrest their function, when contraction of the muscular structures in the vessels takes place. The ferric salts, owing to their property of coagulating albumin and blood, of course produce more marked effects than the ferrous salts. Digitalis and ergot among the organic, and barium chloride among the inorganic, remedies, well known as vascular tonics, furnish apt illustrations of this important principle.

Iron has a tendency to accumulate in the liver; small doses do not show this tendency, but they may serve to increase the functional activity of this organ, when given in a soluble, non-astringent form, by restoring cell-nutrition to the normal.

Large doses of iron, while they do not affect the irritability of muscular structure, lessen materially the amount of work it is capable of performing, while small doses increase the capacity of muscle for work. What is most to

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be desired, therefore, is a preparation not open to the objections inferred from these investigations; but owing to the necessity for consulting the palate of our patients, it is also desirable that the substance should be free from the nauseating effects which are so common to all preparations of iron. The combination, he believes, is to be found in that form known as "*levulose ferride*," which was highly recommended to him several years ago by Dr. James Collins, of Philadelphia. This preparation takes the place of a well known and popular German product called *Eisenzucker* (iron sugar), very extensively used in domestic practice. Dr. Aulde was led to employ iron sugar on account of its palatability—fastidious patients and children making no objections to it; but this has been supplanted by levulose ferride, which in the form of tablet triturates will be taken as readily as chocolate bon-bons. It is readily soluble in an excess of water, and is practically free from any ferruginous taste or styptic effect when dissolved in the mouth, and is substantially a peptonate.

The method of preparing it is briefly as follows: To a certain amount of iron a measured quantity of malt sugar (maltose) is added, and the mixture constantly stirred while exposed on a water bath. While it possesses all the desirable qualities mentioned, the presence of metallic iron may be determined by chemical analysis, the strength of the product being about three per cent This preparation will act much less actively as an astringent than even the ferrous preparations; but, of course, it cannot be expected to take the place of the ferric products, which are sometimes demanded, as in the case of intestinal parasites (sarcina ventriculi and lumbricoides.) On the other hand it will be especially indicated for the relief of anæmia and chlorosis, owing to its ready absorption, lack of astringency, and its palatability. In all cases of defective nutrition, from any cause, where the indigestion of any form of medicament is a trial to the patient, this product will be kindly received. Dr. Aulde gives a synopsis of some cases in which it is indicated, together with a summary of the effects following its employment.

During the early summer he attended a young mother with a six-month's old child, who was very anæmic. He had seen her but once since the delivery of her child. Anticipating that she would not be able to nourish it sufficiently and maintain her health, he had cautioned her in regard to the most appropriate diet. Notwithstanding every

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care had been used, she was finally compelled to seek medical aid or go to bed. All that this patient required was something to increase the amount of hæmoglobin, which would restore the integrity of the red corpuscles and improve the oxygen-carrying capacity of the blood. This being most readily accomplished by levulose ferride, she was ordered to take tablets of this preparation, each containing three grains, after meals. To meet the emergency, and increase the patient's strength until such time as the advantages of the iron would be apparent, small doses of strychnine (one-sixtieth grain) were administered along with the iron. Ordinarily, this class of patients, when they begin in the early summer, suffer more or less from the effects of the heat, and become regular patrons of the doctor; but this patient did not make her appearance again for about two months, when she said she thought it was about time to have a little more of the same medicine. The first medicine was sufficient only to cover the first ten days, and the patient seemed greatly disappointed that she was compelled to return.

So many children are so promptly benefited by a small quantity of iron, that it is a great drawback that no palatable preparation has been put on the market. He has in mind a little fellow who has long been very much adverse to eating meat, due, he presumes, to defective digestion; but for the past few weeks, since he has been taking the levulose ferride, he seems quite content to eat meat alone, and is becoming strong and robust.

Not long ago a lady brought to the doctor a lad, aged fourteen, who had a most forbidding cadaveric expression and could eat no meat. His brother had died at about this age from Bright's disease, and this one presented all the symptoms peculiar to the brother who died. Still, with attention to diet, outdoor exercise in the country, and a tablet triturate containing three grains of levulose ferride after meals, he made a prompt recovery. Although unable to discover symptoms of Bright's disease in this instance the doctor was impressed with the depression due to the anæmic condition; and yet, without some readily assimilable iron preparation, it would have been tedious to start him on the way toward recovery.

Late in the spring of the year a gentleman, aged about thirty-five, called, complaining of dyspepsia, although he had been under the treatment of another physician, for overwork for the preceding four years. After regulating

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his diet and adopting treatment calculated to restore the activity of the digestive apparatus, he was placed upon levulose ferride with strychnine sulphate—three grains of the former in tablet form and one-sixtieth grain of the latter, and did remarkably well on this combination. This product, like all other mild preparations of iron, is mostly indicated in cases of this class and along with these may be mentioned chorea, convalescence from lingering diseases, like typhoid fever; and in all such instances he anticipates that the results will be especially favorable where proper attention is given to dietetic measures.

The powder is taken dry on the tongue, dissolved in water or coffee, or, more conveniently, in the form of tablets, each containing three or five grains. The dose for children ranges from three to ten grains, and for adults from five to thirty grains. The levulose ferride was obtained through Messrs. Eisner & Mendelson Co., of New York, who import this article.

Therapeutic Memoranda.

Asthmatic attacks occurring in Bright's disease are said by Godfrey to be quickly relieved by ten-drop doses of *tincture of strophanthus.*

Complete cessation of the symptoms of *acute pharyngitis* resulted in twenty-four hours in a Philadelphia hospital patient whose pharyngeal pillars and posterior wall were touched *with a nitrate of silver solution* (ʒj to ʒj), followed by a gargle of—

℞ Potassi chloratis—
Ext. rhus glab. fld. āā ʒss
Aquæ ..... q. s. ʒviij—Misce.

For hiccough of drunkenness, two drops of *creosote made from beech tar*, given with a little water, is said to be a specific.

For the *removal of corns*, Dr. W. S. Payne, of Mason City, Ill., uses—

℞ Collodion flex, f. ʒj
Acid. Salicylic, q. s. saturated solution
Cocaine Muriate—4 per cent. solut. gtt. x—Mix.

S: Apply to corn for three consecutive nights, after thoroughly bathing the foot in warm water.

I have used Tongaline both in hospital and private practice, and with excellent results.—Julian S. Patterson, M. D., Assistant Resident Physician to Baltimore Univ. Hospital.

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Koch's Treatment of Tuberculosis.

As a statement of the present status of the "Koch lymph treatment," we take the following abstracts from papers in the *Times and Register*, January 17, 1891:

Dr. Ernest Laplace, Professor of Pathology, etc., Medico-Chirurgical College of Philadelphia, says that to use the lymph for the treatment of tuberculosis, it is dissolved in water, so that, as a rule, the first dose given a patient is one milligramme of the lymph. This is given in the form of hypodermic injections, by means of a sterilized hypodermic syringe, generally in the region of the spinal column.

The pure lymph keeps indefinitely, but once dissolved it soon becomes turbid from the development of micro-organisms; hence Koch advises that the water used be a two per cent. solution of carbolic acid, or, if pure water be used, the liquid to be injected should be sterilized by boiling previous to its being used.

The forms of tuberculosis to be treated must be divided into two great classes:

1. Tuberculosis of the skin, and surgical tuberculosis.
2. Pulmonary tuberculosis.

In all cases of tuberculosis the remedy acts by creating a violent inflammatory process around the tuberculous tissue. This inflammation or reaction takes place after each injection of lymph, and continues to take place until all the tuberculous tissue has been destroyed. The patient then reacts no longer, even under largely increased doses—that is five centigrammes, or even as much as five decigrammes of lymph. A patient who does not react is likewise said to have, through the constant reaction, become free from his tuberculous condition.

From three to eight hours after receiving a sufficient dose, a *lupus* will redden, swell, and begin to secrete a thick serum. Fever rises to 39 C., or even as high as 41 C., in some cases, and will last from eight to twelve hours, when the temperature gradually sinks to below normal—sometimes as low as 36 C. When the reaction is very violent, after one day's interval the same dose is given again, and the dose is increased only when the reaction ceases to be as violent. Gradually, during the course of treatment, the lupus, after thus oozing continuously, begins to cicatrize, and by the time the patient ceases to react under increased doses of lymph, there exists a perfectly smooth surface, where formerly an indolent, tuberculous ulceration existed.

In *tuberculous affections of joints*, these show the reaction

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by swelling and, as a result, pain. The tuberculous tissue, being deep, cannot eliminate itself as promptly as in the case of skin tuberculosis, hence the greater tediousness. Fistulæ and open tuberculous abscesses show increased secretion, and finally close, after the elimination of the tuberculous surface.

In *tuberculosis of bone*, nothing short of the surgical removal of the sequestra can eliminate the parts acted upon by the lymph.

In all cases, the reaction consists in an apparently chemical union of the lymph with the tuberculous cells, resulting in violent congestion, or even inflammation of the neighboring parts. *Tuberculosis cells seem to be the only ones thus acted upon.* This fact must be borne in mind to thoroughly understand the conditions of treatment in the second great class of cases, that is, *pulmonary tuberculosis.* Only such cases as are in the incipient stage are selected for treatment. In these the dose is always one milligramme. The patient reacts exactly in the same way as in other forms of tuberculosis, except that owing to the inflammation, which must, of necessity, take place in the lungs, the respiration is much more labored. Inasmuch as it is now always possible to diagnose the presence of small tubercles, when they are disseminated, the danger of the treatment becomes apparent from the inflammation which will follow wherever tubercles exist, sometimes leaving not enough lung capacity to supply the needs of life, hence the fatal cases reported.

Furthermore, the lung, not being able to rid itself of the tuberculous material as easily as a superficial tuberculosis, it follows that even after the cessation of reaction, when the case ought to be considered as cured, the physical signs remain almost unchanged by auscultation and percussion, as it would require a very long time for such tissue to be resorbed. In a case of tuberculosis of the lungs, under the care of Dr. Cornet, the patient, aged 27, reacted at first violently, under a dose of one milligramme, and in one month of treatment did not react under a dose of one gramme of the pure lymph. In these cases, notwithstanding the fever that necessarily accompanies the reaction, the patient, as a rule, retain their appetite and increase in weight.

Koch has determined that the treatment does not destroy the bacillus—the seed of the disease. What is destroyed is that which has developed from the tissues under the irritation of the bacillus. If the remedy only did this, Koch's object would not be reached.

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There is one means left for curing the tuberculous process: this is, that the lymph should so act upon the system as to render it unsuited to let the bacilli of tuberculosis develop in it. In other words, Koch hopes that the remedy will confer immunity against tuberculosis in man, as he says it does in the guinea-pig.

Prof. Sonnenburg, under the direction of Koch, has applied surgical procedures to the treatment of cavities in the lungs, by resecting the ribs, and scraping the cavity, then establishing drainage. The case is further treated by the lymph injection.

So far, there are no cases, or at least a sufficient number, to establish that immunity is conferred. Several cases of apparently cured lupus have returned, after a week's cessation of treatment; and as for the apparently cured cases of other forms of tuberculosis, it takes a longer time for a recurrence to attract attention.

As to the evil effects of the lymph, a collapse from even a dose of one milligramme has sometimes taken place; though no death has resulted in that condition. Patients have always been restored by the ordinary stimulants. The most dreaded after-effect, and the one upon which the French lay the most stress, is the possible constant irritation of the kidneys by the lymph, leaving these organs in a permanently impaired condition. Albuminuria and hematuria have not unfrequently been noticed. Whether this was due to the mere irritation of the lymph, or to a local reaction in the bladder and kidneys, because of the unexpected existence of tubercles in those organs, is, of course, impossible to decide.

The *contra-indications* to treatment are, therefore, those lesions which, when undergoing the reaction, would, directly or indirectly, endanger life. They are principally: 1. Extensive disease of the larynx. 2. Miliary tuberculosis, or very extensive tuberculosis of the lungs. 3. Tubercular meningitis.

Although there have been, by this time, many thousand cases already treated, it will be apparent from the above that the greatest difficulty exists in forming even the slightest idea as to the number of true cures, if any. Of improvements there can be no doubt; but, since tuberculosis is such a slow process, it is manifest that at least two years are required to ascertain positively whether the patient, who, after a course of treatment for any form of tuberculosis, has to-day ceased to react, has attained that immunity without which he is not to be called cured of tuberculosis.

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In a few cases, a rapid development of tuberculosis has occurred in patients who have been treated with the lymph, and the question has arisen whether the inflammatory reaction had not provoked a migration of tubercle bacilli from the original focus of disease to new localities in the lungs, and, developing there, formed separate and rapidly-developing foci of disease. Whether it be really the case, or whether unsuspected tubercles already existed in other parts than where diagnosed, must remain unsettled.

As a summary, therefore, of the present status of Koch's new discovery, we conclude that in our opinion—

1. This discovery marks a distinct epoch in the history of therapeutics. Contrary to our ideas of the physiological action of drugs, this substance acts solely when tuberculous tissue exists in the body. It thus exercises a specific and selective action. And this is the more admirable, as we have all reasons to surmise that the lymph is directly or indirectly the result of cultures of the bacillus tuberculosis.

2. It is, therefore, a valuable means of diagnosis as to even the unsuspected existence of tuberculosis in the body.

3. Under its continued action, tuberculous tissues are destroyed, and, when possible, are cast off by sloughing.

4. No case of permanent cure, has, to our knowledge, been positively recorded.

5. The large amount of clinical experience already existing, warrants the further trial and careful observation of the remedy in tuberculous cases.

6. Even should the future prove the lymph unsuited to permanently cure tuberculosis, the discovery will still remain an index for future researches in the domain of scientific therapeutics.

Prof. Dixon (same number of *Times and Register*) in speaking of the *diagnostic characteristic* of the remedy, expressed faith, as he believed it to be a metabolic product of the tubercle bacillus, and that the active principle composed about one-thousandth part of the menstruum given out by Dr. Libbertz. The liquid likely contains glycerine, gelatine, and some salt, likely that of gold. He admits that it is yet a question in his mind, whether or not it will not often fan latent tuberculous tissue, that would otherwise have remained inactive, into an active and progressive condition. This possible action, coupled with the fact that we are yet quite ignorant of its final curative power, seemed to satisfy the doctor that it should not, for the present, be used for the purpose of diagnosing.

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He was disappointed with its action on human pulmonary phthisis. Owing to the fact that all vascular tissue surrounding tubercles, when under treatment, is loaded with small, round cells, and that the hyperæmia is so often produced by the remedy, the alveoli in the periphery of the tubercle are rendered incapable of action; should the lesion be too extensive, the decrease in the functionable lung parenchyma will prove fatal to the life of the individual under treatment. To obviate such a risk, the doctor suggested administering smaller quantities than any that have yet been administered, so that the quantity might be neutralized before all the tuberculous tissue was reacted upon.

He cautioned the profession to exhaust all their knowledge in diagnosing before applying the remedy, even in mild cases of pulmonary phthisis (tuberculous), on account of the possibility of lurking danger arising from latent disease, or a strong predisposition of the tissues to the tuberculosis process. When the area of tuberculous tissue is very extensive he was rather of the opinion that the remedy should not be injected.

The symptoms produced by the remedy are about as follows: There may or not be a chill, followed by a temperature running up to 102° F. to 106° F. This generally subsides within two hours after it reaches its maximum, making it about seven hours after injection. This fever, in other cases, remains up some forty-eight hours. Diarrhœa and also enlarged spleen and lymphatic glands, are frequent accompaniments, following the pyrexia. The patients generally look quite ill. Sputum often increases. The bacilli, at first, often increase in number, and would appear to have a changed morphology; that is, they become swollen at the ends and show signs of budding. This may or may not be peculiar to the micro-organisms after or during the treatment, yet he has noticed them more frequently in inoculated cases than in others. The physical signs increase only when new tissue has been made active.

In *lupus* cases he was unable to see any reasons, other than the possibilities mentioned, why it was not a valuable remedy. In those cases the temperature began to rise in about four hours after the injection of the Koch remedy, reaching its maximum suddenly. This, however, soon fell to normal, and with very anæmic patients it fell to subnormal. In one case of pernicious anæmia death soon followed the injection. During this treatment a nodular infiltration took place. The œdema in many cases was exagger-

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ated, as the fever subsided. The patient was often much prostrated. The nodules gradually became covered with a crust, under which could be detected a healthy granulation. Young, red cicatrices form under the crusts, and the lupus spots soon assumed an appearance of recovery. The speaker witnessed one case of a boy ten years old that was apparently making a fine recovery, but just after the injection he broke out in a rash resembling scarlatina, and that the process went on to desquamation; the small, brawny scales coming off and leaving a healthy looking skin. In another case of lupus an irritating cough and harsh voice set in after injection. Then small clusters of red excrescences appeared on the right vocal chord. After some days the lupus was tending to recovery. The vocal chords had improved, and the cough was rapidily decreasing.

Owing to the suppuration caused by the Koch remedy, in the vascular tissue immediately surrounding the tubercles, the remedy is positively *contra-indicated* in tuberculosis of brain tissues.

The doctor saw no reason why a wound, in a patient not predisposed, that had become infested with bacilli could not be successfully treated by the Koch method. *Joint and bone tubercular cases* would seem to make better progress when surgically treated, if first treated with Koch's remedy until the tissues cease to respond to the liquid. The only case of *kidney tuberculosis* seen by the doctor did not improve under the treatment.

In speaking of *laryngeal tuberculosis*, he believed that an extensive area meant danger, and, owing to the fact that it was almost universally accompanied with pulmonary lesions, a most thorough examination must be made of the lungs before injection was indulged in.

Book Notices.

Cyclopædia of the Diseases of Children—Medical and Surgical. Edited by JOHN M. KEATING, M. M. Illustrated. *Volume I.* Published 1889. Large 8vo. Pp. 1003. *Volume II.* Published 1890. Pp. 1066. Philadelphia: J. B. Lippincott & Co. Cloth. Price, $5 a volume.

This *Cyclopædia* is of incalculable value to practitioners. Volume III is about ready for issue. The work covers the entire field, and most of the chapters are of great service to

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him who studies the standard works on the "Practice of Medicine. The articles in this *Cyclopædia* are written by something like thirty-five or forty American, Canadian and British authors for each volume, and have been well chosen because of their reputed special qualifications for such tasks as were assigned them. So many points of excellence pre sent themselves for commendation, that we do not know which topics to specialize. Under the head of "General Subjects" there are two articles that every physician should familiarize himself with, the Anatomy of Children, by Dr. George McClellan, of Philadelphia, and their Physiology, by Dr. Angel Money, of London. To the Southern practitioner especially there is much of value in the well-prepared article by Dr. J. Wellington Byers, of Charlotte, N. C, on the "Influence of Race and Nationality upon Disease. Dr. William C. Dabney, of the University of Virginia, presents many instruttive facts and a long list of well-drawn conclusions on the subject of "Maternal Impressions." Dr. Theophilus Parvin, of Philadelphia, gives a chapter long wished for by obstetricians on the "Injuries of the New Born," received during or in connection with labor. Dr. J. Lewis Smith, of New York, contributes exhaustive practical papers on the ever-important diseases, "Cerebro-Spinal Fever" and "Diphtheria." The article by Dr. John Guiteras, of Charleston, S. C., on "Yellow Fever" contains all the important information on the subject. A better author than Dr. Rudolph Matas, of New Orleans, could not have been chosen for the article on "Dengue." In Volume II we find thoroughly practical papers on "Tuberculosis" and on "Phthisis" by Dr. A. Jacobi, of New York, although written just before the present furor about "Koch's lymph" was begun. Dr. E. Carroll Morgan, of Washington, D. C, devotes a chapter of some twenty-five pages to "Epistaxis," which is of special importance in its relations to so many diseases of organs, etc.; but he omits reference to "Parker's plug," which is of great value in stopping nose-bleed. Dr. B. A. Watson, of Jersey City, writes a most useful paper on "Diseases of the Spleen, and their Operative Treatment." And thus we might consume page after page in merely enumerating well-written, useful articles, of marked importance to practitioners who have anything to do with infants or children. If our references to only a few of the many most valueble articles in the two volumes of the *Cyclopædia* now out influence any of our readers who have not purchased the work to get it for frequent study and reference, we will have done a benefit.

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Prof. Koch's Method to Cure Tuberculosis. Popularly treated by DR. MAX BIRNBAUM. Translated from the German by Dr. FR. BRENDECKE. With an Appendix, being Prof. Koch's first communication on the subject. Translated from the *Deutsche Medicinishe Wochenschrift*, and Explanatory Notes by the Author. Milwaukee, Wis.: H. E. Haferhon. 1891. 8vo. Pp 105. Price: Cloth, $1; paper, 75c. (From Publisher.)

This is a premature publication, in that it does not contain Dr. Koch's statement as to the composition of the "lymph," which was published in January, 1891. We cannot regard it as a work of scientific value, because the author is so enthusiastic in his rash advocacy of Koch's lymph as to give to it virtues not claimed by the discoverer, and certainly not sustained by current reports of cases under treatment. And yet the very enthusiasm of the writer makes this book entertaining reading, although doctor and patient should be cautioned to accept its statements *cum grano salis*.

Auscultation and Percussion. By FREDERICK C. SHATTUCK, M. D., Professor of Clinical Medicine in Harvard University, etc. 1890. George S. Davis, Detroit, Mich. Paper. 12mo. Pp. 121. Price, 25 cents.

This number of "The Physicians' Leisure Library" is on a subject which every-day observations and consultations show to be too imperfectly understood by the majority of practitioners. Dr. Shattuck has written this monograph in the simplest of language which is thoroughly descriptive; and the general run of physicians will do themselves great benefit by devoting an off night or two to a studious reading of this well-issued number of the "Leisure Library." Several well-drawn illustrations are introduced to explain the text.

Modern Treatment of Headaches. By ALLAN McLANE HAMILTON, M. D. No. 6 of "The Physicians' Leisure Library." Paper. 12mo. Pp. 122. Issued monthly. $2.50 a year; single copy, 25 cents. Geo. S. Davis, Detroit, Mich., Publisher. 1890.

An excellent monograph, with special reference to diagnosis and treatment of one of the commonest and yet sometimes most intractable of symptoms. We wish we could persuade our subscribers to better post themselves than most of them do on the suitable therapuetics of so common an affection. A proper study or reading of this monograph will give much information to all practitioners.

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Treatise on Diseasesof Infancy and Childhood. By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children, Bellevue Hospital Medical College; Physician to the N. Y. Foundling Asylum; to the Infant Asylum, etc. Seventh Edition. Thoroughly Revised. With 51 Illustrations. Phliadelphia: Lea Brothers & Co. 1890. 8vo. Pp. 900. Cloth. (From Publishers)

The revised edition is, to all intents and purposes, a re-written work, necessitated particularly by recent investigations and discoveries relating to the bacterial origin of the local as well as constitutional diseases of early life. Many new chapters are, for the first time, introduced, such as those on epilepsy, tetany, appendicitis, typhlitis, conjunctivitis, umbilical diseases, hæmatemesis, etc. In its present form, Dr. mith's *Treatise on Diseases of Infanch and Childhood* is the indispensable practical work for every family physician. The great value of this book is its careful and well-sustained directions in matters af causation, diagnosis, and treatment. As we suppose, few members of the churches who can read and are able, fail to purchase their psalters and hymnals, so we would suppose that every American practitioners, who deals with children's diseases, should own and read and be profited by this most valuable of practical treatises.

Manual of Uuscultation and Percussion. By AUSTIN FLINT, M. D., LL. D., Late Professor of Principles and Practice of Medicine and of Clinical Medicine in Bellevue Hospital Medical College, etc. Fifth Edition—Thoroughly Revised by J. C. WILSON, M. D., Lecturer on Physical Diagnosis in Jefferson Medical College, etc. Philadelphia: Lea Brothers & Co. 1890. Demi 8vo. Pp. 268. (From Publisher.)

The Editor tells of the standard value of this most important work to every student and practitioner, when he says that the most careful examination of the fourth edition leads him to confess that no material change of that edition is necessary to make this fifth edition fully up to the times. In fact, almost word for word is this fifth edition a reprint of the fourth; so that owners of the latter edition are scarcely required to purchase the former. But this very fact most strongly impresses upon those who have neither edition that they should by all means get a copy of this last edition. We say all we could say of any book, that this one contains all the practical information known about aucultation and percussion in medicine, "embracing the physical diagnosis of diseases of the lungs and heart, and of thoracic aneurism."

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Œuvres Completes de J. M. Charcot. Hemorrhagie et Ramollissement du Cerveau. Metallotherapie et Hypnotisme. Electrotherapie. Tome IX. With 84 wood cuts and 18 photo plates. Paris: Bureaux du Progres Medical, 14 Rue des Carmes. 1890. Paper. 8vo. Pp. 571. Price, 11 francs (From Publishers.)

The Complete Works of Dr. Charcot in themselves form a medical library of great value. Part I of the volume before us is on Cerebral Hæmorrhage and Softening; Part II is given up to Metalloscopy, Metallotherapie, Hypnotism, etc.; Part III is devoted to Electrotherapy—limited especially to the uses of static electricity in medicine. An appendix of some thirty odd pages is taken up with a description of "grand" and "petit hypnotisme." The works are edited by Dr. Bourneville, which gives to them a greater value in that he himself is no less an authoritative neurologist than Charcot. It is Part I especially that is of greatest interest to the general run of American practitioners, for they have not, as a class, developed much confidence, for every-day use, in metallotherapy. Yet no one who undertakes the study of neurology can any more do without the great works of Charcot than can the gynecologist do without the teachings of the immortal J. Marion Sims.

Diseases of the Eye. By EDWARD NETTLESHIP F. R. C. S., Ophthalmic Surgeon to St. Thomas' Hospital, London, etc. Fourth American from Fifth English edtition. With a chapter on "Examination for Color Perception," by WILLIAM THOMSON, M. D., Professor of Ophthalmology in Jefferson Medical College, etc. Philadelphia: Lea Brothers & Co. 1890. Royal 11mo. Pp. 508. Price, $2. (From Publishers.)

While every effort has been made consistent with the scope of this now established text book not to enlarge this fifth-edition volume, still such have been the additions to the science of ophthalmology in the last two or three years that the author was compelled to add some twenty-five or thirty pages, so as to keep this edition fully up to the advanced state of the science and art. The most important changes or additions are to be found in the chapter on "Operations" The publishers have also added again the chapter on "Detection of Color-Blindness." Whoever is now paying anything like special attention to eye diseases cannot well afford to do without this work. Three chapters are given to matters of Diagnosis. The Clinical Division occupies about 300 pages. Part III is most valuable to practitioners generally in that it treats of "Diseases of the Eye in Relation to General Diseases" The Appendix gives formulæ, test types, tests for color-blindness, etc.

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Essentials of Practice of Pharmacy, Arranged in the Form of Questions and Answers. Prepared especially for Pharmaceutical Students. By LUCIUS E. SAYRE, Ph. G., Professor of Pharmacy and Materia Medica, School of Pharmacy of University of Kansas. Philadelphia: W. B. Saunders. 1890. 12mo. Pp. 179. Cloth. $1. Interleaved for taking notes, $1.25.

What we have so often said commendatory of other volumes of "Saunders' Question Compends" is applicable to this number, 18. It gives the gist of the whole subject of Practice of Pharmacy. Especially is such a compend useful to the country doctor and town pharmacist. The very best of authors are kept as the guides of information for the author of this book, while the form of his questions and answers has been planned from his observation as to what is the best course for the student to follow. The order of the United States Pharmacopœia has been preserved as far as practicable. A good index assists ready reference to an item of information to be sought.

Compend of Diseases of Children. Especially Adapted for the Use of Medical Students. By MARCUS P. HATFIELD, A. M., M. D., Professor of Diseases of Children, Chicago Medical College, etc. With a colored plate. P. Blakiston, Son & Co., Philadelphia. 1890. From Publishers. Cloth. Price, $1. Interleaved edition for taking notes, $1 25. 12mo. Pp. 185.

This is No. 14 of the "Quiz Compends"—one of the most serviceable series of publications for students attending lectures, or for those about to undergo examinations for graduation, or boards of examiners, or for the practitioner who wishes to get at, as a resumé the pith of authoritative information on a given subject. Dr Hatfield has done his work admirably well. It is surprising to see how much of truly practical information, covering a whole course of study on pediatrics, can be given in so small a space. No medical practitioner or student can well do without frequent reviews of his own learning; and no series can be better than these "Quiz Compends."

The Medical Student's Manual of Chemistry By R. A. WITTHAUS, A. M , M. D., Professor of Chemistry and Physics in Univertry of City of New York; Professor of Chemistry end Toxicology in University of Vermont, etc. Third Edition New York: William Wood & Co. 1890. Cloth. Demi 8vo. Pp. 529. (From Publishers.)

Dr. Witthaus has done a great sorvice to the medical student and profession by selecting his details illustrative of chemical action, formulæ, etc., from the fields of study of

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medicine—thus making this work on Chemistry the very thing long needed by medical students and doctors. It is likewise of special service to the pharmacal student—containing the chemical record of even the most recent introductions into the shops—even up to the summer of 1890. Doctors, pharmacists, and students, in either of these directions, should, by all means, secure this text book, which is also a thorough text-book for the general principles of Chemistry.

Text Book of Materia Medica for Nurses. Compiled by LAVINIA L. DOCK, Graduate of Baltimore Training School for Nurses, Superintendent of Grace Memorial House, etc. G. P. Putnam's Sons, New York. 1890. Demi 8vo. Pp 201. Cloth. $1.25. (For sale by West, Johnston, & Co., Richmond.)

The South has not yet generally received the benefit of "trained nurses," but gradually they are coming in the cities, and soon they will be as numerous in the South as doctors' sign boards. They are a great help in the sick-room. The graduated nurse has nothing to do with the doctor's province of therapeutics, but she should know something of the appearances of drugs and chemicals, their effects, doses, and modes of administration, etc. This "text book" gives precisely such information which makes the nurse who acquires it a most serviceable help in time of need. Many items of useful instruction to the doctor himself are told in this book; and lest the scholar should get beyond her teacher, we would advise practitioners to "read up" from just such a work as this. It is excellent.

Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. By SAMUEL W. GROSS, A. M., M. D., LL. D., Professor of the Principles of Surgery and Clinical Surgery, Jefferson Medical College, etc. *Fourth Edition. Revised by* F. R. STURGIS, M. D. Philadelphia: Lea Brothers & Co. 1890. 8vo. Pp. 178. (From Publishers.)

This indispensable work to the library of every physician and surgeon who undertakes treatment of the disorders of the male sexual organs has been made the more valuable by numerous additions and some revisions made by Dr. Sturgis. An important statement by Dr. Gross, which he has confirmed by statistics he has collected, is that the husband is the impotent party in the marriage bed in the proportion of about one to every six sterile or impotent wives. We know of no book that can take the place of this monograph for practical information on subjects named in the title above given.

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Essentials of Minor Surgery on Bandaging, with an Appendix on Venereal Diseases. Arranged in the form of Questions and Answers. Prepared especially for Students of Medicine. By EDWARD MARTIN, A M., M. D. Professor of Operative Surgery, University of Pennsylvania, etc. Illustrated. Philadelphia: W. B. Saunders. 1890. 12mo. Pp. 166. Cloth, $1; interleaved for taking notes, $1.25. (From Publishers)

This is No. 12 of "Saunders' Question Compends," and, like all the others of them that we have examined, is precisely the book needed by student or doctor about to be examined. It is of special service to the college student who has not the time to read up all of the pages of the full text books while attending a full course of lectures. But let it not be inferred that such an excellent compend even as this is should take the place of an authoritative text book in a curriculum; it is simply to be used as a help to review of lecture and text book.

Woods' Medical and Surgical Monographs. Published Monthly. 8vo. Vol 8. Nos. 2 (November, 1890,) and 3 (December, 1890). About 300 pages a number. William Wood & Co., New York, N. Y., Publishers. $10 a year—12 numbers; single copy, $1.

The contents of the *November No.* are "Treatment of Uterine Affections by Massage," by Dr. Eugene Arendt; "Cosmetics," by Dr. Heinrich Paschkis, of Vienna; "Affections of the Stomach in Diseases of the Male Genital Organs," by Dr. Alexander Peyer, of Schaffhausen. *December No.:* "Practical Guide to the Demonstration of Bacteria in Animal Tissues," by Dr. H. Kühne, of Wiesbaden; "Present Position of Antiseptic Surgery," by Sir Joseph Lister; "Cancer and its Complications," by Charles Egerton Jennings, F. R. C. S.; "Treatment of Epilepsy," by Dr. C. H. Féré, of Paris; "Handbook to Dr. Koch's Treatment in Tubercular Disease," by Edward F. Grün, M. R. C. S, and Walter D. Severn. Each of these monographs is practical and valuable to the practitioner.

The Health Restorative Co.,

Who prepare a truly "Restorative Wine of Coca" and the popular antipyritic and analgeric "Febricide Pills," etc., have removed their place of business to 90 South Fifth Avenue, New York, N. Y. See advertising page 7.

The McArthur Hypophosphite Co.

Has issued an attractive calendar for 1891, which any of our readers can get upon request addressed to our advertisers on white card-board facing advertising page 51.

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Editorial.

Dr. Hunter McGuire

Injured one of his fingers while operating on a patient at St. Luke's Home a few weeks ago. This caused him to stop surgical operations for ten days or two weeks, and sensational rumors got afloat as to the seriousness of his injuries, causing letters of inquiry, sympathy, etc., to come in from subscribers from many sections of the country. We are glad to say Dr. McGuire is well and at work again. We saw, among other cuses in his hospital (St. Luke's), six laparatomies—all getting well.

Medical Attendance for the Poor of Richmond, Va.

We are a little ashamed to have to confess that Richmond, with its nearly 100,000 population, has no city hospital, except the hospital wards in its almshouse. No other city, in Europe or North America, of anything like its population, so far as we know, is without its distinctive "city hospital" for the care of its sick or wounded working classes, who are by no means the "poor-house poor people." To make a break in the right direction, however, the City Council has just voted $2,000 annually, to be divided between four physicians, to be elected, located in different parts of the city, whose duty it shall be to attend the deserving poor of their respective four districts of the city, without charge. This provision is far better than nothing, as heretofore.

The Water we Drink,

Also the ice used in it, are becoming items of *serious* interest. Recent research by Prof. Pruden, of New York, asserts that countless myriads of organic germs are found in all ice blocks cut on rivers which skirt cities. Now, if this be true of the transparent crystal cubes, hewn from beds of flint, what must be the nature of the water drawn from the same source and not having undergone the freezing process? It is well for us that we cannot see the hideous animalculæ that float down our throats. It has been determined beyond any question, by analysis, that the typhoid germ retains its vitality even at six degrees below zero, and these germs may be retained as long as the ice lasts and may then, if melted and taken into the human stomach, come out of their torpid condition and produce various disturbances in the human system. It is, therefore, important that we should examine into this subject, and thereby pre-

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vent in a large measure the distress and disease that constantly occur around us. The pure mineral waters that flow fresh from under the rocks of our grand old mountains, at an altitude of 1.300 feet above sea-level, should claim our unbiased judgment. Among them, none have a better or more deserved reputation than the waters of the Blue Ridge Springs, in Botetourt county, Va. Numerous remarkable results of the use of this water have been recorded, but it is sufficient only to call attention to the certificates of two well-known and eminent physicians of Petersburg, Va., found on advertising page 38, of this issue. The proprietor, Capt. Phil. F. Brown, informs us that during the past season he had to refuse between four and five hundred applications for accommodations. But he hopes to obviate such a necessity during the coming season because of additional buildings now being erected.

Hxdrastics vs. Phthisis.

In 1882 the tubercle bacillus was discovered by Koch. It is now generally conceded that tuberculosis is coincident with the presence of these microphytes. The important consideration, then, is how to exterminate these pathognomonic germs, or prevent the putrefactive process which they induce.

Dr. A. Judson Palmer, of Brooklyn, N. Y., says (*Medical Current*) that he has used hydrastis for the past thirty years as a local application to inflamed mucous surfaces. Noting its efficiency, especially in inflammatory conditions of the pharynx, it occurred to him that it might be equally efficacious in the treatment of bronchitis, if applied directly to the inflamed membrane. Accordingly, about four years ago, to accomplish this, he administered it by inhalation in the form of a vapor, freed from spray, and thus secured its deposit when required. The result was very satisfactory. He then used it in a case of bronchitis complicated with chronic hepatization, due to incomplete restoration from an attack of pneumonia, which had occurred two months previously. Not only the bronchitis, but also the pneumonic deposit disappeared. He then determined to test its virtue in phthisis, and has now been using it in the different stages of this disease over three years. He thinks the result justifies the assertion that in it is a remedy of remarkable efficacy in the treatment of phthisis, if properly and perseveringly used; and that the majority of cases, while in the arly stages, can thus be restored to a condition of apparent health. Precisely in what manner its extraordinary influ-

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ence is exerted, is a question upon which opinions may differ, but, in some way, it has a decidedly specific action upon this disease.

During the first month of treatment the night-sweats usually disappear, and the cough and expectoration greatly diminish; the patient has a better appetite, better digestion, and gains in strength.

In cases so far advanced as to be incurable, the patients are so much relieved that they regard the remedy as indispensable to their comfort. Its hæmostatic properties render it of great value as a preventive of hæmorrhage. He obtains the best results by using it in combination with chloride of sodium, one part of the fluid extract of hydrastis canadensis to three parts of a saturated solution of the salt.

The fact that he uses it in conjunction with salt may lead to the supposition that salt is the principal agent in effecting the cure; but he has obtained the same results by using it mixed with glycerine and water.

The volume of vapor should be moderate at first, and gradually increased from day to day as the patient becomes accustomed to its use. After this, he advises deep inspirations to insure the entrance of the vapor to the remote air cells. When patients are taking the inhalations at their homes, the physician should visit them sufficiently often to watch the effect of the treatment and to advise in regard to the strength of medicine and the volume of vapor. In most cases he continues the inhalations once or twice daily until he observes a decided improvement, after which he regulates the frequency according to circumstances. Care, of course, should be taken to place the patient under as favorable hygienic conditions as possible.

Micajah & Co.'s Medicated Uterine Wafers.

Dr. Abram Livezey, of Yardley, Pa., says (*Medical Summary*, December, 1890,) these wafers have astonished him in their medicinal efficacy. This "little wafer, or tablet, about the size of a lady's index finger-nail, pushed up to the os uteri every third night—which the patient can easily do herself lying upon her back—produces wonderful curative results in weakness of the tissues in giving tonicity to the muscular fibres of the vagina, thus curing all the displacements which the injections, usually recommended, fail to produce. Contract the vagina, and prolapse cannot occur." He then cites the case of a married woman about fifty years of age who had for several years pains in her left iliac space, running to the back; painful urination, smarting and ten-

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derness of urethra; often much distress about the rectum, slight leucorrhœa, soft and relaxed vagina, and a longer train of nervous symptoms. All sorts of treatment had failed to give relief, when he began to use these wafers—one every third night—and a wonderful improvement began. The vagina became rugous, like a virgin's, and all pain and smarting ceased in a few weeks. He refers to a number of other cases, showing that these wafers are invaluable to poor women, who cannot pay for prolonged medical attendance, etc.

Budwell Pharmacal Co.

Is the title of the new firm in Roanoke, Va., which will hereafter have charge of the manufacture of "Budwell's Emulsion of Cod Liver Oil," etc. Mr. James Carr, until recently representing in this section the firm of Messrs. Fairchild Brothers & Foster, is now an active member of the above Roanoke company. The other members of this company are Messrs. Walter Budwell, J. F. Christian and J. P Barbee. The popularity growing out of the usefulness of Budwell's Emulsion has fully justified the enlargement of this corporation by the the addition of Mr. Carr, who is already most favorably known to the profession of the South.

International Medical Annual.

The publisher, Mr. E. B. Treat, 5 Cooper Union, New York, N. Y., announces as in press for early publication the ninth yearly issue of this *Annual*. Its corps of thirty-seven editors, comprising the brightest and best American, English and French authors, will vie with previous issues in making it even more popular and useful. Some of the best practitioners assest that the service rendered by this *Annual* canuot be duplicated by any current annual, and that it is an absolute necessity to every physician. The Index of New Remedies and Ditionary of New Treatment, epitomized in one ready-reference volume at the low price of $2.75, make it a desirable investment for the busy practitioner, student and chemist.

Dio-viburnia,

The formula of which is published in the advertisement page, is a uterine tonic, antispasmodic and anodyne of such decided virtues, according to the testimony of professors and practitioners of known ability, that it deserves this special notice. Its range of usefulness in general practice is very extensive.

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American Electro-Therapeutic Association

Was organized January 22, 1891, in New York, N. Y., by the adoption of a Constitution and By-laws and the election of the following officers: *President*, Dr G. Betten Massey, Philadelphia; *Vice-Presidents*, Drs. Wm. J. Norton and Augustin H. Goelet, New York; *Secretary*, Dr. Wm. H. Walling, Philadelphia, Pa.; *Treasurer*, Geo. H. Rohe, Baltimore, Md.; *Executive Council*—Drs. Horatio R. Bigelow, Philadelphia; Franklin H. Martin, Chicago; Wm. F. Hutchinson, Providence, R. I; Frederick Peterson, New York, and Chauncey D. Palmer, Cincinnati, Ohio. The object of the Association is "the cultivation and promotion of knowledge in whatever relates to the application of electricity in medicine and surgery." The Association starts with a strong and vigorous membership, and has every prospect of a most useful and successful career. The next meeting will be held in Philadelphia, in September of this year.

Virginia Pharmacal Co.

We are glad to learn that the pharmaceutical preparations of this company, whose factory is in this city, is rapidly growing in favor of both the physician and pharmacist wherever they are introduced. We know the gentlemen conducting this enterprise. They are among the most able and trustworthy pharmacists of the State. We know the character and quality of their goods, and we confidently recommend them to the medical profession as altogether coming up to the high standard of excellence claimed for them. One of the representatives of the company, Mr. R. D. Apple, is calling on the medical profession of North Carolina, and we ask for him a hearing and a test of the pharmaceutical preparations of the company.

Operation Blanks.

Messrs. Lea Brothers & Co., of Philadelphia, have published in pad form a very serviceable series of blanks, prepared by Dr. W. W. Keen, which the surgeon is to fill up, giving directions as to how the patient is to be prepared for a given operation, dressings, instruments, medicines, etc., to be on hand. One form, after filling up, is to be handed to the nurse; the other is to be sent to the drug store. On the back of the pad is printed a list of the instruments required in various operations. We most cordially recommend these blanks as very serviceable to surgeons. Each pad of fifty blanks, 50 cents.

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Koch's Lymph in Therapeutics.

As might have been expected from the secret methods of production adopted by the author, and the still actually persistent concealment of details of manufacture by Dr. Koch, this "lymph" has a much more narrow range of use than was claimed for it even so late as two or three months ago. Every journal has to say its say about this agent. Our position about such announcements as excited the world of doctors and patients with consumption, is to take a conservative view of the facts—neither denying nor claiming too much. "Learn to labor and to wait" until a truth is developed before hurrahing. We have a right to look upon Dr. Koch's methods of secrecy in manufacture or development of the "lymph" as of the same character as that adopted by manufacturers of proprietary preparations. Concealment of his methods of manufacture has been so long, and yet the sale of the lymph has been so large and the pressing demand to know so great that one is forced to the conclusion that Dr. Koch's secrecy has been measurably prompted by other and less noble purposes than doing good to humanity.

Renz & Henry's Elixir of Three Chlorides

Is an elegant preparation of the chlorides of iron, arsenic and mercury, in a form that is palatable and very serviceable as a tonic and alterative—useful in a great variety of conditions which naturally suggest themselves to the doctor. In an article by Dr. C. L. Dana, of New York city, he says, "We find in chorea, first, a vasomotor paralysis and trophic disturbance affecting certain areas of the brain, and, to a less extent, of the cord. Then we have this becoming chronic, with connective tissue hyperplasia, and degenerating changes in the ganglionic cells and fibres." This view of the subject derives confirmation by the flattering results obtained by several physicians who have used the "elixir of the three chlorides" in the treatment of chorea.

Dr. J. S. Dorset,

Until now Superintendent of the Texas State Lunatic Asylum, at Austin, will open a sanitarium in Fort Worth, Tex., early this spring for the treatment and cure of patients having nervous diseases, those addicted to the opium and alcohol habits, etc. We are glad such a sanitarium is to be established in the South by one so competent and well trained by hospital service as physician-in-chief to take charge of such an institution as is proposed.

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Changes in Columbia Hospital, Washington, D. C.

Dr. P. J. Murphy has been supplanted by a *staff* at Columbia Hospital, of which he was until recently physician-in-chief. Drs. J. W. Bovee and L. W. Ritchie have been placed in charge of the Obstetrical Department, and Dr. Jos. Taber Johnson in charge of the Gynæcological. The new staff have made some very radical and necessary demands for improvements in the way of a new matron, thoroughly trained nurses, an operating room which shall be tiled and equipped equal to the best in the country, a new and perfect armamentarium chirurgicum, etc. An appropriation of $1,500 was at once made to furnish and equip a new operating room for Dr. Taber Johnson, and $1,000 more for various other instruments, so as to bring the appointments of the hospital fully up to date.

Restorative Wine of Coca,

Prepared by the Health Restorative Co., of New York, N. Y., is an excellent tonic in laryngeal and gastric troubles, a diffusible stimulant in anæmia, nervous depression, melancholia, tardy convalescence, general malaise and in cases where there is much depression and atony. Dr. Wm. A. Hammond has discarded other wines of coca, and uses this one alone. Common experience with this preparation shows its great value as a restorative agent whenever the best of coca wines is indicated.

Campho-Phenique.

This agent is of real value in general practice, in surgical work, in gynæcological operations—major and minor—as a substitute for iodoform, as a genericide, etc. Besides its uses in diphtheria, as pointed out in our January number by Dr. M. D. Hoge, Jr., we would ask the attention of our readers to the extra-advertisement page, 9.

Messrs. T. C. Morgan & Co.,

Manufacturing Chemists, 32 Platt St., New York, N. Y., are new advertisers, but an "old, reliable" house. Their pharmaceutical specialties, including tablets triturates, hypodermic tablets, compressed tablets, etc., are of the highest grade of excellence, as we have had recent occasion to find out. Their liquid hypophosphites is an excellent preparation, made *without sugar*, and fills, therefore, a most serviceable place where the hypophosphite syrups are not tolerated. Their quincoca is a nutritious tonic, nervine and stimulant, described in their advertisement on page 40.

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Mobile County [Ala.] Medical Society.

At the meeting held on the last Saturday in December, 1890, the following were unanimously elected for the year 1891: Dr. Rhett Goode, *President;* Dr. Charles Martin, Jr., *Vice-President;* Dr. W. R. Jackson, *Secretary;* Dr. D. E. Smith, *Treasurer;* Dr. Samuel R. Olliphant, *Member of the Board of State Censors;* Dr. Angelo Festorazzi, *Librarian.* On the night of January 3rd an elegant banquet was tendered by the officers elect to the members of the Society at Spottswood's palatial rooms. Everything that the culinary art could suggest was laid open. Wines flowed profusely, and, with the elegant speeches made, the affair closed as the midnight sound ran through the stillness of the night.

Dr. Livius Lankford

Has just returned to his home in Norfolk, Va., after a visit of some four or five months to the medical centres of Europe. He was a member of the Medical Examining Board of Virginia until he resigned in anticipation of his trip abroad. While in London he passed the examinations of the Recommending Committee, and was elected a Fellow of the British Gynæcological Society. He (the only American student at the time) took a course of instruction under Dr. Heron, of the Victoria Chest Hospital in London—the largest hospital of the kind in England. Dr. Heron was for two years a private pupil of Prof. Koch, and was the first to have the "Koch lymph" entrusted to him in England. Then Dr. Lankford went to Berlin, and through Dr. Heron's influence with Dr. A. Libbertz (Dr. Koch's agent), succeeded in arranging for supplies of the now-famous lymph. Dr. Lankford will, therefore, now be better prepared than any Virginia doctor that we know of to administer the "Koch's lymph treatment." Dr. Lankford's visit abroad was not so much for pleasure as to take a private pupilage post graduate course under several of the eminent lights of the world. We welcome him home.

Obituary Record.

Dr. Milton A. Ish

Died at his home at Neabsco Mills, Prince William county, Va., December 15, 1890. He joined the Medical Society of Virginia in 1874, and was active in all that promoted the interests of that organization. He was influential in his profession and a most excellent practitioner of medicine.

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VIRGINIA
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RICHMOND, MARCH, 1891.

Original Communications.

ART. I.—Cervical Adenitis—Its Etiology, Symptoms and Diagnosis.*

By A. JACOBI, M. D., of New York, N. Y.

LATE PRESIDENT OF THE ACADEMY, AND CLINICAL PROFESSOR IN THE COLLEGE OF PHYSICIANS AND SURGEONS, ETC.

The great lymphatic trunks are three in number—the jugular, the subclavian, and the broncho-mediastinal. The first carries lymph from the head and neck; the second gathers that of the upper extremity and the anterior wall of the chest; and the third that of the lower extremities and the posterior part of thorax. On the left side of the body, the latter is represented by the thoracic duct, which attends to the collection of chyle and the rest of the lymph circulating in the abdominal and thoracic organs. These three trunks are usually but short, and discharge their contents, which float in the network of innumerable ducts, into the veins. Before so doing, they sometimes join, on either side, into a common lymphatic trunk. The innumerable lymph ducts which form the trunks have to pass the so-called lymphatic glands; such of these which are peripherous send

*Read before the New York Academy of Medicine, Jan'ry 15th, 1891.

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their vasa efferentia into the inner tiers; thus the vas efferens of the superficial glands becomes the afferens of one more centrally located.

The subject of to-night's discussion is the jugular trunk. Its large number of lymph ducts, both small and large, superficial and deep-seated, forms an incredibly complicated but still regular network, which is subdivided into two plexuses—the superficial or external, and the deep or internal jugular plexus. The first gathers the ducts distributed over the occipital, aural, and temporal regions. There are the occipital glands (one or two) near the linea nuchæ, the frequent seats of disease in erysipelas and phlegmon of vertex and occiput; near these are the posterior auricular glands, situated over the insertion of the sterno-cleido-muscle; with them combines a network of ducts originating in the territory of the facial veins. From two to four anterior auricular glands gather the lymph from the temporal regions, and are located above and below the parotid. The submaxillary glands collect the lymph of the forehead, eyelids, surface of the nose, cheeks, lips and chin—indeed, all the surface parts of the face—also some of the cerebral portions, particularly the floor of the mouth, and part of the tongue. Here it is where the first deposits take place in epithelioma of the lip. Adjoining are two or three mental glands. To the same plexus belong five or six superficial cervical glands. They are covered by the platysma, lie on or behind the sterno-cleido-mastoid, and are intimately connected with the posterior auricular and the submaxillary glands. In them the lymph of the external ear and the skin of the throat and neck is collected, and many of the morbid processes take place in these superficial cervical glands.

The external and the internal jugular plexuses are, however, by no means strictly separated from each other. The latter receives the vasa efferentia of the superficial cervical glands, also the ducts of the central layers of the face with their four or six deep facial glands on the side of pharynx, also a number of the vasa efferentia of the submental

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glands. The deep-seated facial glands, three or six in number, are situated behind the buccinator muscle and alongside the pharynx. They receive the lymph of the temporal and spheno-maxillary fossæ, of the orbit, the nares, the superior maxilla, palate and pharynx. To them belongs a gland first described by Tortual, which lies between the long muscle of the head (longus capitis) and the sulcus of of the posterior wall of the pharynx. Some of the retro-pharyngeal abscesses result from its morbid changes.

The internal jugular plexus extends also along the large blood-vessels to the base of the skull, where it gathers the intra-cranial ducts. Its deep cervical glands, from ten to twenty in number, are distinguished as upper and lower—the latter being adjacent to and connected with the superficial cervical glands. The upper deep cervical glands collect the ducts of both pharynx and tongue, along which there are three or four lingual glands; also of the inner muscles of the neck, of larynx and thyroid gland.

The lingual glands receive most of the lymph from the tongue, the lower part of the pharynx, the deep muscles of the throat and neck, of the larynx and thyroid.

The lower deep-seated cervical glands are located in the supraclavicular space, on the brachial plexus and scalenus muscle, and extend as far as the axillary glands. Through the tier of the upper deep cervical glands they receive the lymph from the whole head and neck, and independently that of the lower part of the integuments of the skin, and of the muscles of the neck; of the lower part of the larynx, of the thyroid and of the trachea; of the lower part of the fauces and of the œsophagus, of the vertebral canal and posterior part of cranial cavity. They are intimately connected with the lymphatic glands of the axilla and of the thorax, and owe their peculiar pathological dignity to both the extent of their connection and communication, and their location behind and alongside the internal and the common jugular vein.

Curnow and Treves (quoted in Ashby's article on "Scrofulosis," in Keating's *Cyclopædia*, Vol. II), have the following

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table destined to show the relation of glands to the territories drained by them:

Suboccipital and mastoid: Posterior half of head.
Parotid lymphatic glands: Anterior half of head, orbits, nose, upper jaw, upper part of pharynx.
Submaxillary lymphatic glands: Lower gums, lower part of face, front of mouth and tongue.
Suprahyoid: Anterior part of tongue, chin, lower lip.
Superficial cervical (beneath platysma): External ear, side of head, neck and face.
Retropharyngeal: Nasal fossæ and upper part of pharynx.
Deep cervical (upper set along carotid sheath): Mouth, tonsils, palate, lower part of pharynx, larynx, posterior part of tongue, nasal fossæ, parotid and submaxillary glands, interior of skull, deep parts of neck and head.
Deep cervical (lower set in supraclavicular fossæ: Drain upper set of lymph glands, lower part of neck, and join axillary and mediastinal glands.

I have spoken of the organs which form the subject of our discussion to-night as lymphatic glands. This is the term by which they are mostly known. If for our purpose it were necessary, we might well question its appropriateness; for they are not glands, in the actual meaning of that term. They do not secrete, they are but receptacles, depots, hardly anything beyond that, and the term of lymph bodies is more accurate than that of lymphatic glands. Both of the terms, however, may be used in to-night's discussion.

The frequency of morbid changes in the lymph bodies is explained by the large amount of cells which form the bulk of their structure. They are still similar to the embryonic cells, increase and proliferate as rapidly, and therefore tumefactions are brought about readily. As a copious net of blood-vessels penetrates their follicular substance, they may undergo morbid changes through the intervention of the blood. When the latter is the cause of disease, the whole system of lymph bodies is liable to be affected simultaneously. This, however, is but an occasional occurrence. Indeed, in the majority of cases only groups of lymph bodies, or single lymph bodies, are affected. The cause of disease

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must, then, be looked for in the circulating lymph, which, both under normal and abnormal circumstances, is retained and filtered in the lymph spaces, which are not open tubes, but a fine net-work of cavities lined with endothelium. Foreign bodies of any description floating in the lymph are there retained and undergo changes. These, as also chemical changes of the lymph itself, irritate the lymph body and produce disease. Thus it is that but few morbid changes of the lymph bodies are primary, almost all of them are secondary.

These changes are mostly the result of, or complicated with, hyperæmia and inflammation. At once there is swelling and increasing consistency; in exceptional cases the tissue becomes softer. On section it shows hypæremia, which may depend on either dilatation of the blood vessels, or the presence of a bloody serum, or hæmorrhages, or two or all of these conditions. The tumefaction of adjacent glands is sometimes such as to render the distinction of the single gland from each other an impossibility. Often they are flattened upon each other. Within the extended capsule the lymphoid cell constituents increase in different ways. Leucocytes are retained in large numbers, lymph cells continue to float in, a sub-division takes place, and the endothelia and nuclear cells undergo changes into similar or equal organic particles. This condition may undergo restitution, or a hyperplastic induration may take place through nuclear proliferation in the stroma. Besides, suppuration may occur, or necrosis. The fibrous induration is more frequently met with in the bronchial, tracheal, mesenteric, axillary and inguinal glands than in the cervical. In the inguinal it is very common—so common, indeed, that they are frequently seen at every age without any morbid symptoms. This change exhibits, in many cases, its chronic character from the very beginning. The glands are not always enlarged, they are white and hard on section; the capsule is thickened, the cell substance is diminished, the gland appears to consist, more or less, of connective tissue only.

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The suppurative change may be confined to the gland, at least temporarily, or the neighboring tissues participate in the process at an early period. Small abscesses originate mostly in the follicular substance, prove confluent so as to form a larger abscess, and finally burst, or are incised. Recovery takes place by a shrinking process, by cicatrization, by the formation of a fistula, sometimes accompanied with lymphorrhœa, when larger lymph ducts happened to be injured, or by desiccation, caseation or calcification. This is the second form of chronicity.

The third series of chronic adenitis is the caseous. Its nature is that of an aseptic necrosis, mostly under the influence of scrofulous or tuberculous predisposition. Caseous adenitis is preferably found in the cervical, bronchial and mesenteric glands. Its incipient stage is hyperplasia; next, cell conglomeration in the lymph spaces; one of the final changes, through deposition of carbonate of calcium, either uniform or disseminated, calcification; another is softening, which, through absence of circulation and through the mutual compression of the crowding cell-material, begins in the centre, but may succeed in perforating into neighboring cavities, such as trachea or veins. This simple caseation is often found by itself; sometimes, however, with tubercular caseation, also with fibrous inflammation. If the latter be predominant, actual or apparent recovery may take place. The genuine tubercular caseation looks very much like the non-specific kind, but it exhibits tubercles consisting of either small, round, lymph-like, or flat epithelioid, or giant cells, or a mixture of all of them, which, when confluent, form larger or smaller masses, either coherent or isolated, in the follicular tissue. There they are easily recognized, unless hyaline or colloid transmutation have taken place.

The *etiology* of glandular tumefaction, both cervical and general, on the basis of hyperæmia or inflammation, has been mentioned before under two heads. General infection may act through the blood; thus in universal putrid and septic infection, in anthrax, lepra, leucocythæmia and pseudoleucocythæmia, under the influence of Koch's lymph, in

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syphilis, also in enteric fever. In both of the latter, however, the local irritation results in local glandular affection, by preference. Still more local is the action of the diphtheria virus. An example of more general infection, or rather predisposition, is the peculiar fragility and inflammability of all the tissues which we are accustomed to call scrofulosis.

The large majority of cases of adenitis, both acute and chronic, however, owe their existence to a local influence. They are produced by morphological or chemical changes in the circulating lymph, which result in local irritation of the lymph spaces of the glands. That result is mostly an acute adenitis. This acute adenitis is liable to undergo resolution, as stated before. It is much more liable to become chronic, however, unless relieved in time; for actual hyperplasia, when the proliferated or conglomerated cell material, particularly of the stroma, has become organized, is not amenable to easy re-absorption. Or the adenitis becomes chronic from the beginning, when the cause acts gently but persistently. The final result may be exactly the same in both cases. Whether there are other influences predisposing to bring forth either the acute or the chronic form, such as a peculiar congenital or acquired tendency, amount of cell accumulation, disturbance of the morbid process, or interruption of the regressive change, can hardly be determined in the individual cases.

After all, most forms and cases of adenitis are of local origin; it is that local origin which has to be traced in every single case. In many, that study is very simple; in others, particularly in those which have lasted a long time, the connection of chronic adenitis with its original source is no longer traceable. In the child of advanced years and the adult, the history of chronic cervical tumefaction may, therefore, be quite obscure; in the infant and young child, the elucidation of the etiology is mostly easy.

According to all that has been said, chronic adenitis in all its forms may result from lesions of any kind. The best protection against it is normal health and the absence of any

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breaks in the integuments. It is through these latter that septic invasions will take place. Traumatism will produce adenitis directly—thus, a blow, a fall. But these cases are rare enough. Erysipelas has the same effect. Insect bites raise a glandular swelling immediately. The obstinate adenitis of the neck is often the result of pediculi, or of eczema, or impetigo capitis; heal these—contrary to the public prejudice—and most of the glandular noduli and nodi disappear spontaneously. Of aural diseases, it is the mastoid abscess and a simple aural catarrh which result in adenitis of long standing. The fibrous condition of the floor of the external ear is easily perforated by a suppurating gland underneath, and recovery is very slow unless a counter-incision be made into the very abscess. The eye is productive of chronic adenitis through conjunctivitis and corneal ulceration. Herpes zoster, always a local disease following the course of a nerve, is the cause of local adenitis; left frontal zoster in a boy of seven produced suppurative adenitis in front of the left ear, and protracted chronic induration of the glands near the angle of the lower jaw and under the chin; cervical zoster tumefies jugular and cervical glands; labial and mental zoster, the frequent form of so-called fever blisters, give rise to adenitis, both acute and chronic, sometimes characteristically unilateral. The nose is a frequent source of cervical adenitis; every ailment interfering with the healthy condition of the mucous membranes gives rise to adenitis, from an innocent nasal catarrh to its consecutive ulcerations, from the lesions produced by a foreign body to the septic influence of diphtheria. A small number of cases of so-called scrofulous glands of the neck, for which the children had been punished with cod-liver oil, have been cured by the extraction of shoe buttons. No tot with a persistent running of the nose, not to speak of the danger incurred by the upholstered chairs and the trousers of the doctor, will escape its dozens of enlarged glands; they will be either prevented or mostly cured by keeping the nose clean with a physiological salt-water solution only, to the exclusion of everything else. It is a pecu-

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liar instance of specialistic oversight, that in a book on nasal diseases by Turasz, just published, no single mention is made of adenitis as a sequela of nasal catarrh. Boring in the nose, resulting from any irritation of the mucous membrane, for instance, from intestinal causes, with its local lesions, is productive of chronic adenitis. That is the explanation of the alleged connection of intestinal parasites with adenitis. Worms irritate, both by direct influence and reflex action, the mucous membrane; this is injured by the infant fingers, and the local lesion resulting therefrom produces the tumefaction of the glands.

There is perhaps no better illustration of the rapidity with which adenitis is apt to come and go, according to the neglect or treatment of the nose and naso-pharynx, than nasal diphtheria. There is nobody here but has met with those cases in which the cervical glands would swell within hours, within a day to such an extent as to render the poor sufferer unrecognizable. These cases of nasal diphtheria were given up as lost twenty-five years ago. It is only since the connection of this ominous septic adenitis with its source in the nasal mucous membranes was fully recognized, and my demand to disinfect the nasal mucous membrane has become fully appreciated, that nasal diphtheria is no longer the absolutely fatal disease which it was believed to be. As fast as the glands swell under the influence of the septic poison, just as rapidly will they diminish in size under that of cleanliness and disinfection. If not so reduced, they will lead to death, or chronic changes. These latter are of different characters. Many will become hard and persist in that form; some few will suppurate in small multiple places, which may remain a long time undiscovered and unhealed. Altogether, however, suppuration is not so frequent in diphtheria as it is in other inflammatory or infectious diseases. In not a few cases of the severest types necrosis will be the termination of the acute swelling.

Cracked lips permit the invasion of microbes and the development of consequent adenitis; epithelioma influences the neighboring glands in the same way. Every form of

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stomatitis—the follicular, aphthous and parasitic, and the denuding of the surface by a burn (hot food included), have the same effect. The tongue is a frequent cause of adenitis, either through catarrh and inflammation, or the surface lesions in infectious diseases. There is no better protection to the system than intact integuments. The most injurious poisons, such as peptones and enzymes, are changed into albuminates in a healthy mucous membrane; but cracks and rents allow them to enter the circulation directly. Not only does such an occurrence take place in the stomach and intestine, but in the mouth and tongue. The cracked tongue of a typhoid patient is an inlet to micrococci of all sorts; it is they which destroy more patients than the original typhoid infection. The first to suffer are the neighboring lymphatic glands. They also suffer in general catarrhal and inflammatory angina, be it the result of an infection, or a foreign body, even a fish-bone; not so much in circumscribed affections of the tonsils, for these are so snugly surrounded by a solid fibrous capsule that an extensive lymph communication with the system is out of the question. Thus it happens that even in diphtheria, when it is limited to the tonsils, the glands swell but little if at all, and constitutional symptoms are but few, in contradistinction from deep-seated follicular, inflammatory, or suppurative amygdalitis, all of which produce an active fever and systemic disturbances. Partly through their influence on the surface, partly through their pharyngeal complications will measles, scarlatina, and other infectious fevers, affect the cervical glands.

Dentition, as long as it takes its physiological course, has no such influence, but as soon as the gums undergo a high degree of hyperæmia and irritation, the glands become affected; so they will from carious teeth, periostitis, osteomyelitis, or phosphorus necrosis; so also from the presence of parasites—for instance, the streptothrix of actinomyces. Through their irritating influence on the oral mucous membranes, drugs will have the same effect—for instance, mercury and iodine.

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Vaccination, particularly when animal lymph was used according to Ashby, has been observed to result in cervical adenitis, even without much general disturbance. The axillary glands are in intimate connection with the cervical, which may swell with the former. Chronic bronchitis results in swelling of the mediastinal glands; their intimate connection with the lower tier of the cervical affects these; that observation can be made in those chronic bronchitides of the tubercular and rhachitical babies in many instances; acute pulmonary diseases exhibit similar results. The vasomotor changes of the face, its local flush lasting for days, mostly unilateral on the side of an acute pneumonia, are well known; not so commonly known, however, is the tumefaction of cervical glands in cases of pleuro-pneumonia of the upper lobe. This disease has an immediate influence upon the intra-throracic lymph bodies adjacent to the apices, and through them on the suprajacent cervical lymph bodies.

As the glandular tumefaction develops very fast, and an acute adenitis becomes chronic in the different ways alluded to before, as, moreover, the local irritation is by no means always arrested in the nearest gland, or group of glands, the cause of the morbid changes may disappear, may not even be remembered; but the result remains in the shape of either hyperplasia or chronic suppuration and cicatrization. The former condition is more frequently seen in advanced years, and in deep-seated glands which are least exposed to external injuries, than in the early period of life, and the glands near the surface.

I shall close, Mr. President, with a few remarks referring to *diagnosis*.

Pus inside a gland is not always detected with ease, for the multiple abscesses are often but small. Though they melted together into a larger abscess, the presence or absence of fluctuation is liable to depend on the thickness and rigidity of the capsule. Now and then fluctuation is readily felt; if not, there is sometimes a circumscribed soft, small spot which can be discovered by steadying the organ be-

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tween two fingers of one hand and gently tapping on the suspended place with a finger of the other. Local pain is frequently absent. When, however, the neighboring organs participate in the process, and the skin becomes red and sensitive, the diagnosis is easy enough. The sensation of fluctuation, however, is often misleading. Large glands may be mistaken for sarcomata and *vice versa*. These latter pseudoplasms yield a peculiar apparent fluctuation, though there be no complication with cysts. This semi-fluctuation is almost characteristic for sarcomata in every region. I have described it in the fœtal and infant sarcomata of the kidney, in an essay which was published in the *Transactions of the Eighth International Congress of Copenhagen*, in 1884. In this connection I may add, that it may become altogether difficult to determine the exact nature of the glandular swelling. As I said before, the presence of pus cannot always be discovered at an early moment. Nobody can say, with positive certainty, when the first central softening takes place, nor to what extent there is, in an individual case, a mixture of the hyperplastic, cellular, or caseous, either simple or tubercular, elements. Still less is there an absolute certainty, in every case, of the presence or absence of a malignant nature in a large glandular swelling. The difficulty is so much the more comprehensible the greater the variety in the morphological diagnoses of the histologists; indeed, the application of the terms of lymphoma, adenoma and sarcoma is not identical with the different authors. Besides, the frequency of such terms as lymphadenoma, lymphosarcoma and adenosarcoma proves the impossibility of establishing fixed boundary lines between the several forms. The gradual increase in size, however, without softening, speaks for the malignancy of the tumor; the presence of more swellings of the same character, in other parts of the body, either simultaneously or within a limited time, may prove the existence of Hodgkin's pseudoleucocythæmia, the same with the enlargement of spleen or liver and the characteristic changes of the blood that of leucocythæmia.

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The diagnosis of glandular abscesses, to differentiate them from suppurations of other sources, is not always easy. There are retro- and latero-pharyngeal abscesses penetrating to the surface, those resulting from caries of the mastoid process, the vertical column, or the maxilla; those from the sternum and sternal junction of the clavicle which ascend along the sterno-mastoid muscle; those originating in a myositis of this muscle, or in a periostitis of the hyoid bone or perichondritis of the cricoid cartilage, or the rare cases of perforations upwards, of pulmonary cavities, or empyema; those rising from metastatic carcinomatous glands, or from old cicatricial tissue. All of them may test the observer's experience and dexterity. In a number of cases the diagnosis will be determined by the original localization of the swelling, or of the pain, if any there be, and by the first seat of secondary symptoms, such as difficulty of deglutition, respiration or muscular function.

110 *West 34th Street.*

ART. II.—**Arsenic as a Cause of Herpes Zoster.***

By GEO. BYRD HARRISON, M. D., of Washington, D. C.

The case which I present to you is that of a lady of our city about seventy years of age, who removed from her town-house to her country residence, several miles from the city, about five weeks ago.

On the 28th day of April, I was summoned by telegraph, and within fifteen minutes of the receipt of this message her husband came to say that she had *erysipelas*, was *very sick*, and *suffering great pain.*

Of course she was at once visited and examined, but was found to have no erysipelas at all, but an exceedingly painful case of zoster of the right side, about the sixth interspace, extending from the spine to the mesial line. This was a surprise to me; for, although a patient, and an appreciative one (for several years past), I had not prescribed

* Read before the Medical and Surgical Society, Washingon, D. C., May 13th, 1890.

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for her since the first week of the new year. She had gained thirteen pounds weight during her winter sojourn in the city, and gone to her country home in excellent plight; but had been troubled a good deal, I found, since going out, by the difficulty of finding good servants and otherwise adjusting her household affairs.

On inquiry, I learned that (some five weeks before I saw her) she had consulted one of our best ear specialists, who had cleared out her ears, and prescribed Fowler's solution in small doses (one drop *ter in die*). Why a tonic of this sort was suggested in her case I don't know. But the dose would seem too small to cause any damage, even if the drug was contra-indicated—*i. e.*, unless her case was exceptional.

Her case happens to be exceptional, however; and serves, I think, to illustrate the impropriety of the *specialist* usurping the part of the *attending physician*, and prescribing general treatment for a patient of whose constitution he necessarily knows nothing.

She is so susceptible to drugs that ten drops of tinct. opii deodor. (the mildest and most harmless of all the preparations of opium), given at bed-time, to relieve the agonizing pain of this disease, caused *nausea* next morning. And a *double* dose (*i. e.*, two doses of ten drops each, with an hour or two interval), caused *alarming prostration* the following morning.

Of course I cannot say that the arsenical treatment, *undoubtedly*, caused the attack in this instance, but simply present to you, for *free discussion*, the facts of the case, along with the testimony of competent observers, that zoster has frequently owed its existence to the therapeutic use of arsenic.

I may say that her husband, knowing how rebellious her constitution is to the action of medicine, objected to her employing the arsenic; and that I have carefully kept from him my suspicions that the drug is at the bottom of this mischief.

The attack has been *almost alarming;* and has demanded three visits to the suburban home; to say nothing of *office*

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consultations through friends. She is convalescing now, I consider, although a sufferer, and much debilitated.

As to the *ætiology* of the complaint (herpes zoster), authorities are, apparently, so much at variance, that I prefer to represent them by their own words.

Dr. Roberts Bartholow (*Practice of Medicine*, 1880,) says: "The author has seen eight cases in which the herpes seemed to be due to arsenic, and others have made the same observation; so that the assumption that, when zoster accompanies intercostal neuralgia, neuritis is the cause of both phenomena, seems hardly justified."

Dr. L. Duncan Bulkley (*Aid to the Study of Skin Diseases*, 1881,) gives the following opinion: "The causes of this acute inflammation of the nerve trunk, and the resulting inflammation of the skin, are not always determined. Generally, the exciting cause is cold; but, strange to say, it is exceedingly uncommon for a person to have this eruption a second time."

Dr. Tilbury Fox (*Epitomé of Skin Diseases*, 1879,) holds that zoster is "due to an inflammatory condition of the nerves that go to the seat of eruption, or probably the posterior spinal ganglia connected therewith."

Dr. Robert Liveing (*Hand-Book of Skin Diseases*, 1887,) in one of the fullest accounts of the disease, its symptoms, diagnosis, and treatment, that I have read, summarily dismisses its ætiology by defining zona as an "inflammation of the skin directly produced by nervous influence." He gives us, by the way, the following caution, which I have met with nowhere else: "There is a rare form of syphilitic eruption, which, on its first appearance, so closely resembles zona as to render the diagnosis very difficult. The syphilide is, however, usually bilateral or irregularly symmetrical. This fact should at once suggest a very careful examination in bilateral cases for other signs of syphilis."

Dr. A Balmanno Squire (*Contribution to Reynolds' System*, 1880,) gives, under the head "*Causes*," the following description: "Herpes zoster occurs at all ages. It is commoner in the summer than in the winter. It follows sometimes exposure to cold, sometimes violent fits of passion. At certain irregular periods, herpes zoster gets suddenly to be very much commoner than they usually are; and an epidemic of the disease, if it may be called so, prevails."

Our own accomplished dermatologist, Dr. Jas. C. McGuire, writes me as follows:

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MAY 6TH, 1890.

Dear Doctor:

In regard to your questions concerning *herpes zoster*, caused by the internal administration of arsenic, I have found the following references by different observers:

P. A. Morrow (*Drug Eruptions*) simply refers to *Hutchinson's* cases, and says: "His observations have been supplemented by the experience of many other dermatologists who have noticed this coincidence."

Piffard (*Materia Medica and Therapeutics of the Skin*), says: "An eruption of zoster has also been noticed in patients during a course of arsenical medications. *I have seen two such cases.*"

In the same book, he simply refers to the following, who have observed this occurrence:

Sisson.—The Practitioner, London, 1869.

Duffin.—The London Lancet, 1869.

Finlayson (*London Practitioner*, July, 1878,) refers to "an eruption of clusters of vesicles, on an inflamed base, extending from the lower part of the arm, down the back of forearm and hand, including the back of the fingers."

Fox.—London Lancet, 1867.

Duhring (*Diseases of the Skin*) says: "Cases are certainly met with where it seems highly probable that the outbreak (of zoster) was due to this agent (arsenic)."

Hutchinson's (*Archives of Surgery*) extract in the *British Journal of Dermatology*, January, 1870, reads: "This drug (arsenic) is well known to produce, in some cases, much disturbance in the nutrition of the skin, causing it to become pigmented, or muddy and dull; producing psoriatic looking patches, and bringing on zoster and hyperkeratosis of the palms and soles, which may develop into epithelioma. In a case where a lady was taking the drug for the treatment of psoriasis of the nails, it made the whites of the eyes look thick and yellow. Zoster of a severe type developed."

R. L. Faithful, M. D., L. R. C. P., Sydney, September, 1886, in the *Journal of Cutaneous and Venereal Diseases*, New York, 1886, mentions "herpes preputialis, in one case, which always made its appearance after giving arsenic for a few days."

As to my own experience: A patient of mine developed zoster while taking arsenic in tonic doses; but, in this case, I think it was independent of the drug, as she had taken

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arsenic before this, and had taken it since, without the appearance of cutaneous trouble.

I hope these references may be of some assistance.

Sincerely yours, JAS. C. MCGUIRE.

P. S.—It may be of interest to know that Hutchinson was the first to call attention to the occurrence of zoster caused by the internal administration of arsenic.

J. C. MCGUIRE.

H. C. Wood (*Materia Medica, Therapeutics, and Toxicology*, Edition 1881,) sums up our knowledge of the physiological action of small doses of the drug thus: "All that we know of the effect of arsenic upon the system throws only light enough upon its therapeutic action to enable us to class it as an alterative—a modifier, and often an improver of nutrition."

Lauder-Brunton, 1885, and *Farquharson*, 1889, are not much more satisfactory, according to my researches, in their valuable works on Materia Medica and Therapeutics.

I propose to try your patience further, merely by reciting the considerations which have induced me to regard my case as "one in point"—*i. e.*, zona of arsenical origin.

1st. I do not think the patient's condition could have been such as to indicate tonic treatment at the time the arsenical course began, for the reasons given above, viz: Increase of body weight, good health and spirits, etc. Harm would, therefore, naturally result from the exhibition of this or any other drug of such stimulating tendency.

2nd. I have the best reasons for believing that she received more of the drug than the specialist ordered. He told her the merits of a "dropper" (a novelty to her); and her son told me (without leading questions), that, on more than one occasion, the dose was indefinite because of her awkward handling of the instrument.

3rd. She was stimulated by the drug to a degree perceptible to herself and to the members of her family.

4th. Her "anti-drug idiosyncrasy" is phenomenal. Now that she seems convalescent, when tonics (especially ferruginous ones), are strongly indicated, I can only use food and *small* doses of whiskey. (Quinine, iron, hypophosphites, are all interdicted.)

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5th. She has never taken arsenic before, as I learn; so that her case cannot be classified with Dr. McGuire's case, mentioned above.

I have frankly alluded to the domestic annoyances incident to removal from a town to a country-house; as a source of nerve irritation, to which, perhaps, rather than to the drug, some might attribute the attack.

605 *Fourteenth Street, N. W.*

Art. III.—The Treatment of Detachment of the Retina.*

By DAVID WEBSTER, M. D., of New York, N. Y.,

Professor of Ophthalmology in the New York Polyclinic, and in Dartmouth Medical College; Surgeon to the Manhattan Eye and Ear Hospital, Etc.

Detachment of the retina, though not as common nor as amenable to treatment as many other diseases of the eye, is still sufficiently common and sufficiently amenable to treatment to merit our earnest attention. Over 300 cases have been seen at the Manhattan Eye and Ear Hospital since it commenced work in 1869; and in the year ending October 1, 1890, there were 29 cases, or about one-third of one per cent. of all eye cases.

It would hardly be proper, in the short time allotted to readers of papers before this Society, to go into the pathology of detachment of the retina. Suffice it to say, it is a disease of the eye in which the retina is separated from the choroid by a thin, serous, and sometimes bloody fluid. Of course the detached part of the retina loses its power of seeing, and the field of vision is correspondingly diminished, so that if the entire retina is detached, the eye becomes totally blind. If only a portion of the retina is detached, that which remains in contact with the choroid still sees, and if the detached portion can be restored to its natural position before it has been detached too long, it will resume

* Read before the Medical Society of the State of New York, February 4, 1891.

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or recover its seeing power more or less completely. The object of all treatment, then, is the restoration of the retina to its normal position—contact with the choroid.

From the fall of 1869 to the spring of 1871, while I was House Surgeon to the Brooklyn Eye and Ear Hospital, I do not think that any patient was treated in that institution for detachment of the retina. The surgeons were among the most distinguished ophthalmologists then living in this country—Drs. Agnew, Loring, and Roosa. Detachment of the retina being diagnosticated, the patient was told that it was beyond our power to do anything for him. At the same time he was told that the eye-sight sometimes got well of itself—that sight might be recovered spontaneously. A case of spontaneous recovery had not long before been observed in this city. Thus, the patient was not deprived of all hope, but the surgeon knew that his chances for spontaneous recovery were almost infinitesimal. My impression is that the same course was pursued by all the surgeons while I was House Surgeon to the Manhattan Eye and Ear Hospital from 1871 to 1873, and that Dr. Agnew gave the same opinion in all such cases the first two years I was with him in his private practice.

It is not to be inferred from what I have said that various means and methods were not being used in other parts of the world at that time, but I intend only to give an idea of the feeling among American ophthalmologists during that era.

Dr. Agnew never performed any operation for detachment of the retina. In 1875 he began to revise his practice so far as to advise rest in the supine position in such cases. The eyes were kept under influence of atropine, and bandaged. This treatment was kept up for from ten days to six weeks in each case. A considerable proportion of recent cases were improved; most of them relapsed and became as bad as before. A very few seemed to be cured permanently. It was at least an improvement upon the old method of doing nothing.

Some years later, and soon after jaborandi came into use

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by the profession, we began to treat our patients with hypodermic injections of the muriate of pilocarpine, in addition to the recumbent posture, atropine, and bandaging. The injections were given daily, or every other day, in doses of about one-sixth grain, or just enough to cause copious sweating and salivation. This was found to be a great improvement on the former methods of treatment. A very considerable proportion of recent cases treated in this way were improved, and a much larger proportion were cured than had been by previous methods.

Many years ago, as far back as 1850, long before I began the study of ophthalmology, distinguished ophthalmologists abroad—notably Sichel—resorted to what seems to me a rational method of treatment—namely, treatment by operation. There are two methods of operating—one to go in in front of the sac and puncture it, in the hope that the subretinal fluid will escape into the vitreous chamber and thus allow the retina to reunite with the choroid; the other, to puncture the eye-ball at the site of the detachment and allow the subretinal fluid to escape externally. The former would seem the more rational operation, theoretically. The latter is the more successful operation, and involves less danger to the eye practically.

In 1887, my attention was forcibly called to the employment of operative procedure in detachment of the retina by a case of Dr. T. Y. Sutphen, of Newark, N. J. The patient was a book-keeper, and was dependent upon his salary for support. Dr. Sutphen sent him to me in consultation. I found detachment of both retinæ, and gave a very discouraging prognosis, as he had had thorough treatment by pilocarpine injections and recumbent rest. He returned to Dr. Sutphen, who operated upon both eyes by scleral puncture. The result was complete and permanent re-attachment of the retina in one eye, with some temporary improvement in the other.

Dr. Sutphen's report of this case is published in the *Transactions of the American Ophthalmological Society* for 1888.

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The patient is still earning a living for himself and family as a book-keeper.

Dr. Sutphen's case had at least the effect of stirring me up and making me think that I was not doing all for my own detachment cases that might be done.

In March, 1889, I did my first operation by scleral puncture. Since then, I have operated nine times in all. The results have been encouraging. All the eyes operated upon were improved more or less—some of them only temporarily. In one case the result was perfect, the retina everywhere becoming reattached and remaining so. The central vision was raised from $\frac{20}{200}$ to $\frac{20}{40}$, and the visual field was complete. The result in another case was *almost* perfect. The central vision was permanently raised from perception of light to $\frac{20}{40}$; the visual field was made complete; but a very limited and shallow detachment could still be seen in the extreme upper periphery of the fundus, and there were still some floating bodies in the vitreous when I last saw the patient. Several other eyes were greatly improved.

I am happy to say that several of my colleagues have had their attention called to this method of the treatment of detached retina, and that operations have been done by Drs. E. Gruening, J. B. Emmerson, and F. H. Wilson—all with encouraging results. I think that the feeling at the Manhattan Eye and Ear Hospital now is that an operation should be resorted to in all recent cases in which all other known methods have failed.

266 *Madison Avenue.*

ART. IV.—General Lymphadenomata Complicating Labor—A Case.*

By J. WESLEY BOVEE, M. D., of Washington, D. C.

The subject of general lymphadenosis is of great interest, though yet *sub judice*. Its importance is, in itself, not particularly as a complication, but as it is usually, independent

* Read before the Medical and Surgical Society of the District of Columbia, November 17, 1890.

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of every known condition except its sequelæ. Usually the glands are slightly enlarged, due to a hyperplasia going on in that part of the lymphatic system. It may be that various growths, such as sarcomata, fibromata, and myxomata, occur in the lymphatic glands.

But the enlarged glands, due to hyperplasia, is the kind now under consideration. The causes of this malady are not well understood yet, though improper food, bad hygienic conditions, and insufficient clothing, may assist in producing it. The male sex, it is said, is most frequently affected, and it is also considered a condition of early and late life. My patient, the history of which appears in this paper, was a female, and could not well be considered of either early or late life.

Of this condition there are two varieties. In the one, there is no alteration in the blood known; while in the other, the white blood corpuscles are greatly increased in number. This is the sole difference between the two varieties, and the microscope must tell us this difference.

It would be a great step in advancement of the study of these growths if some reason were deduced for a given case being either one rather than the other variety. As a complication of labor, I know of no other case, and the case about to be related caused me no little anxiety. The large growths felt about the pregnant uterus and the neck, the feeble pains and the extremely weak condition of the patient, rendered the prospects hazardous.

And yet the patient was much better after delivery, at the time of her discharge from the hospital, than when admitted. The child presented no evidence of having inherited the disease, and improved while in the hospital. The case is as follows:

Fanny Baker, mulatto, 23 years old; single; nativity and residence, Virginia; was admitted to Columbia Lying-in Asylum in labor at 3 P. M., March 1st, 1887. The cervix uteri was found dilated about an inch. The child's head was found presenting in the L. O. A. position, and uterine contractions occurring with about fifteen minutes' interval. There was considerable excoriation about the vulva and the

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vagina. The whole abdomen was unsymmetrically enlarged; the gravid uterus was to the left and extended three inches above the umbilicus; to the right of, and above it, was felt a soft bulging tumor, the lower border of which was fairly regular, extending from under the ribs on the left side downward to the umbilicus, covering the upper part of uterus, and thence curving to the right, becoming lost under right quadratus lumborum muscle, about two inches above iliac crest. No fluctuation in this tumor could be detected.

Upon this enlargement, about two inches above its lower edge, and three inches to right of umbilicus, was felt a hard, round growth of about two inches in diameter, freely movable, and yet apparently held in some restraint as if pedunculated.

Three or four inches lower, a similar growth was noticed and as easily manipulated. This one was just below the sulcus, at the lower border of the large tumor, and easily moved to front of uterus, where it could be readily grasped by the hand. In the uterine wall were three or four nodules, smaller than the tumors just described, but of the same consistence and outline.

The lymphatic glands of the groin were very hard and tender, and enlarged to the size of butter-nuts. Upon either side of the neck the lymphatic glands were very large and apparently merged into one large mass extending from about the parotid gland to the sternum, and from near the trachea and larynx in front to the trapezius muscle behind. They were quite thick, hard—some larger than normal kidneys—and conveying to the fingers no sense of fluctuation. The thyroid body was not enlarged. Heart-sounds strong and distinct; pulse normal; first sound of heart was accompanied by a distinct murmur thought to be mitral. It was thought there was cardiac hypertrophy with mitral insufficiency. Mammary glands were small like male breasts, but were pigmented, as usual, in pregnancy; coarse mucous râles over middle of chest anteriorly—an indication of bronchial catarrh, as there was no evidence of lung trouble. Skin moist and pale; eyes large and protruding. Her antecedent history was as follows: Of her father, she knew nothing, he having died when she was three months old, of a disease not known to her. Her mother died four years ago of heart disease following rheumatism. Of the two children born to her mother in slavery, she knows nothing.

Fanny never had good health. When a small child, she

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had diphtheria; at fifteen years of age, scarlatina; and measles at seventeen. Has had throat trouble ever since the attack of scarlet fever; and for the last five years has had a prolonged attack of malarial intoxication that was occasionally paroxysmal and prevented her pursuing her work—that of a seamstress. She has had large "waxen kernels" on the sides of her neck since 1881, but not so large as they now are. They never "gathered," and she noticed that when her throat was very sore they enlarged, and as the condition of the throat improved they became smaller. She has also had, during the past four years, a cough with considerable expectoration. Last summer she was obliged to stop running the sewing machine on account of pain in right side, in which region she felt large lumps.

Menstruation began at thirteen years, and continued regularly until July 1st, 1886, except two or three months suppression at each exacerbation of the malarial poisoning. The flow was usually profuse—lasting eight to ten days—very painful and weakening her very much. The last malarial attack began in May, 1886, being of the quotidian, and sometimes double quotidian, type, and ceased the following September.

She did not know until November that she was pregnant, and has been confined to bed since early in December, 1886, with great pain over liver, accompanied by profuse perspiration at night. After very feeble and infrequent pains and considerable fatigue to her, she was delivered that night, at 10:30 P. M., of a living female child weighing six pounds.

The child bore evidence, such as non-ossification of skull, small size, feeble condition, etc., of being born prematurely. However, no enlarged glands, nor other signs of inherited disease, were discovered. It was received into a warmed woollen blanket, and allowed to receive from placenta all the blood possible before severing the funis. The small size of the child was a very fortunate condition for the mother, as she was probably too weak to withstand a labor very much harder. The nodules in the uterus were easily manipulated while the fourteen ounces placenta was being expelled. The perineum was scarcely nicked.

The woman was now given a drachm of Squibb's fluid extract of ergot, and a douche of mercuric bichloride solution (1.4000), at a temperature of 110° Fahr. A napkin soaked in same solution, and wrung out, was applied to the vulva.

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The abdomen was again examined, with the following result: The enlargement thought to be the liver had receded posteriorly, but not in any other direction; the globular enlargements, thought to be enlarged mesenteric glands, were still easily manipulated through the abdominal wall, and the few in the wall of the uterus remained in that location.

March 2nd.—She was given fifteen drops of the syrup of iodine of iron three times daily; is doing nicely.

March 3rd.—Morning temperature up; recession of one degree during day.

March 4th.—Morning temperature, 102 2°; pulse, 120; pain in chest, but none in lower part of abdomen; uterus hard, and extended about three inches above pubes, lochial discharge, scanty and offensive. Hot douches of bichloride of mercury solution (1.2000) every two hours; two bricks put under each post of head of bed; no milk secreted

Evening.—Coughed considerably to-day; expectoration slight; alternate flushes of heat and cold pass along back of neck; pain in chest continues; is easiest in sitting posture; pulse, 120 and feeble; temperature, near 103°. Fifteen drops tincture digitalis substituted for the iron.

March 5th.—Propped up in bed, and felt much better in the evening

March 6th.—Cough continues; general condition improving. Stopped digitalis and gave three grains quinia sulph. every four hours.

March 7th.—Considerable pain and extreme tenderness over liver.

March 10th.—Allowed to sit up out of bed; no diminution in size of glands.

March 11th.—Temperature high in the evening, due, probably, to fatigue.

March 13th.—The enlarged glands do not diminish in size, being as large as they were at date of her admission.

Spirits turpentine was applied cold (by wetting cloths with it and laying them on) six times daily to the enlarged glands and liver. The glands now began decreasing, and the patient states that the turpentine relieves the pain; lochia still offensive and douches continued.

March 19th.—Improved; examination of urine—clear amber; sp. grav. 1,010; no albumen, bile or sugar; considerable pus was found by the microscope. As the urine was not drawn by catheter, but was voided by the patient, it is thought the pus came from the parturient canal.

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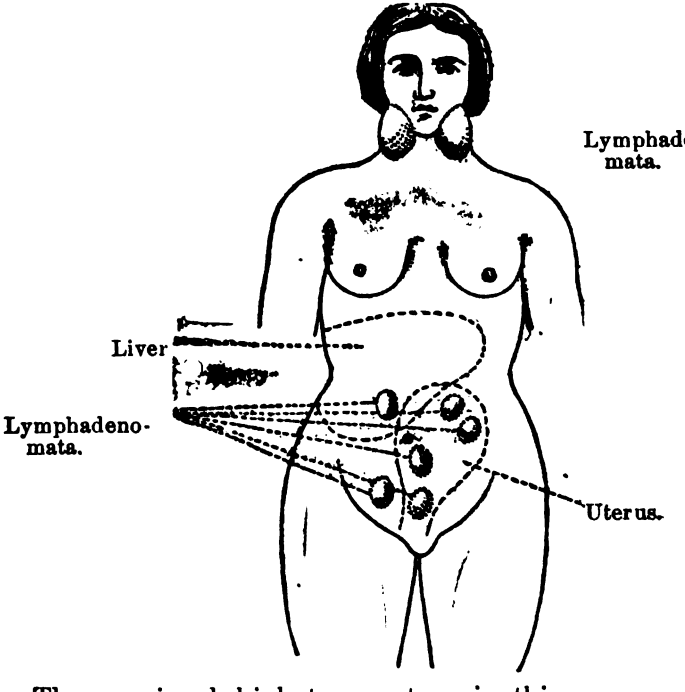
March 25th.—Glands about one-half the size they were on the 13th; she says she can no longer see those on her neck; liver decreased in size; appetite fair; her bowels were regular throughout. Not a drop of milk was known to be secreted, and the mammary glands remained of original size. The child was fed on condensed milk, and was in good condition when it was taken away by its mother March 26th.

The douches, as well as the quinia, were continued until her discharge from the hospital. The loud heart-sounds remain as does the systolic murmur. Night sweats continue.

March 21st, 1887.—Dr. E. C. Merriam, who had treated her, says he first saw her in November, 1886. He treated her for bronchial trouble, and found her at first in bed endeavoring to conceal from her friends her condition of pregnancy. Her principal complaints were of scanty urine and pain in abdomen. He noticed that the glands of neck were enlarged.



The occasional high temperature in this case was only

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symptomatic of the peculiar condition of the lymphatic glands, and not at all modified by labor. Whether secondary deposits in other organs were present, I cannot state, but none were noticed. It is a rare condition, and its existence with pregnancy is a rarity, inasmuch as it usually occurs in early and late life, and in males, so that its presence in a pregnant female would not be expected.

The cut exhibited shows a fair representation of the appearance of the patient before delivery and during labor. I hope the members of this Society may have some valuable information on this subject to contribute.

916 *Fifteenth Street.*

ART. V.—The Constitutional Factor in Diseases and Errors of the Eye.*

By CHARLES H. MAY, M. D., of New York, N. Y.,

CHIEF OF EYE CLINIC, VANDERBILT CLINIC, COLLEGE OF PHYSICIANS AND SURGEONS (COLUMBIA COLLEGE), NEW YORK; VISITING OCULIST AND AURIST TO THE RANDALL'S ISLAND HOSPITALS, NEW YORK; ASSISTANT SURGEON NEW YORK OPHTHALMIC AND AURAL INSTITUTE, ETC.

So much has been written about the uses of the ophthalmoscope in general medicine, that the general practitioner might, with justice, retaliate and refer to the many uses to which a sufficient knowledge of general medicine can be put in treating diseases of the eye. There are, undoubtedly, many affections of the eye which present only local symptoms, which are the result of local causes only, and are crustated by an exclusively local treatment. The majority of ocular diseases are of this kind; hence ophthalmology approaches a fixed science, and is, in many respects, devoid of the uncertainty which must, necessarily, be attendant upon general medicine, and upon certain other specialties closely allied to general medicine. But while this is so, it is also a well-known fact, that not a small number of diseases of the eye are inseparably connected, in an

* Read before the Richmond (Va.) Academy of Medicine and Surgery, February 17th, 1891.

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ætiological sense, with conditions affecting the entire system; are accompanied by symptoms indicating an abnormal or a diseased constitutional condition, and are best treated by remedies which look to effecting some change in the general condition of the patient, or in curing some general disease or diathesis from which he is suffering. In most instances, in the cases to which the writer refers, the general and the local treatment go hand in hand, and success is dependent upon the combination. There are, undoubtedly, many diseases of the eye which become intractable, chronic, and even apparently incurable, when the constitutional factors in their production are lost sight of; it is such cases to which it is desired to call attention. The subject is, of course, not new; and these matters are abundantly treated of in text-books. But notwithstanding this, diseases of the eye are too frequently looked upon as due to purely local influences, and treated accordingly; and this fact will, I trust, serve as a *raison d' être* for these lines In citing examples of such connection between ocular diseases and constitutional factors, we will find equally positive relationships whether we consider the actually diseased or structurally changed conditions of the eye, or whether we consider errors of refraction—conditions which are not, strictly speaking, diseases of the eye.

In the lids, we have many conditions which are interesting in this connection. The occurrence of the stye, a small circumscribed swelling of the edge of the lid due to an inflammation of the hair follicle or of several hair follicles, is usually insignificant, but sometimes, whilst in the course of formation, it gives the impression of greater importance than it is really entitled to. Such hordeola are the most common examples of a constitutional disturbance, slight though it may be, and this dependence upon a constitutional state explains why they occur in crops—that is, when one appears, it is usually followed by others, due to this same systemic error which lasts a certain length of time. This dyscrasia or diathesis is called the "furuncular diathesis," though the exact meaning of this phrase is still uncertain;

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however, we recognize the *condition*, even though we are not entirely clear about its meaning. These styes are really furuncles, just as occur elsewhere upon the body, and exactly the same as occur in the external auditory canal, for instance, giving rise to the quite painful affection called circumscribed external otitis. The local treatment of styes is really very unimportant, and does not influence their course to any appreciable extent; it is sometimes possible to abort them by the use of cold compresses if seen early, when there is merely a little swelling and redness, and no evidences of the formation of pus; or if aborting them fails, and pus appears, their progress may be facilitated by the use of hot compresses (cloths wrung out of very hot water and changed frequently)—and these, it may be remarked incidentally, are more cleanly and more effective than the use of bread, flaxseed, or slippery elm poultices. But if we content ourselves with such local treatment, all we can hope to do is to abort each one or facilitate its development; others are sure to follow. This fact, then, suggests the most important part of the treatment—that of the system, so as to relieve it of a condition which predisposes to the occurrence of these small but annoying swellings. For this condition, the writer has seen so many evidences of marked and rapidly satisfactory results from the use of the compound syrup of the hypophosphites with iron that he invariably uses it; to be effective, it should be given in large doses, from one to three teasponfuls three times a day, and continued for two or three weeks beyond the time when the last stye made its appearance and was aborted. Sulphide of calcium, which, in doses of gr. $\frac{1}{8}$ three times a day, was formerly highly recommended for this furuncular diathesis, is now less frequently employed, and the writer's experience with it has been unsatisfactory; it always did enjoy more of a reputation in treating the furuncular diathesis when it showed itself in the ear. The writer has seen the compound syrup of the hypophosphites with iron cut short the occurrence of a crop of styes, after use for only a day or two, in a sufficiently large number of cases to eliminate the element of chance.

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The unsightly condition of the edges of the lids called blepharitis is, in many respects, similar in its nature; it is really an eczema of the edges of the lids at and surrounding the hair follicles. In these cases, constitutional treatment is very often of the greatest importance, for often the trouble is a local evidence of some systemic disorder. Local treatment by the almost classical yellow oxide of mercury ointment and nitrate of silver will cause a disappearance of the evil; but when these applications are discontinued, we may find it return in some cases in which there exists some impairment of health, unless such strumous or other diathesis be treated. That very common disorder of the lids, palpebral conjunctivitis, is modified very much in its course by the condition of the system. We find cases of conjunctivitis which respond to treatment, to local treatment, very rapidly and very satisfactorily; but there are others which are very obstinate. Leaving out of consideration eyestrain, which so very often explains the unsatisfactory results of local treatment we can find many constitutional factors which are potent reasons for such obstinacy. Let us take, for instance, the very common condition, anæmia. When such a patient develops conjunctivitis—a simple catarrhal conjunctivitis—the effects of local treatment will be found much more rapid and satisfactory if the proper systemic management of the case be added. Another instance is furnished by the manner in which the constitutional state in alcoholic subjects seems to neutralize the local effects of proper topical applications; the obstinacy of such cases is well-known, and as marked as is the rapid improvement following a discontinuance of the alcoholic habit. Many of the acute febrile diseases, and some of the chronic diseases, are accompanied by conjunctivitis, the duration of which depends entirely upon the duration of the acute or chronic disease.

In the disease of the ocular conjunctiva, showing itself in a circumscribed congestion of the episcleral tissue, and which we call episcleritis, a constitutional factor, such as the rheumatic or gouty diathesis is looked for in a great many

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cases; and such cases—tedious though they are—are rendered less so by judicious internal medication, the local condition possibly requiring no attention at all.

It is a common experience to find the treatment of trachoma a much more prolonged one in anæmic, unhealthy children than in those who are well-nourished and in good health; and even in the latter class of patients, we may be able to explain why certain cases respond to treatment so much more rapidly than others, local and surrounding conditions being the same, if we look for reasons based upon the general condition of the patient. In all cases of granular lids, proper general treatment, when needed, hastens the cure materially.

The cornea is a part of the eye, whose physical properties and exposed position give us easy evidence of many systemic disorders. From the earliest period of life to its close, when the loss of tension, lack of lustre, and commencing haziness, give us one of the best signs of death, it serves, to a certain extent, as a criterion of the general condition of the body, and often forms an index of constitutional disorders. The parenchymatous infiltration in hereditary syphilis is very characteristic, and though there may be some difference of opinion as to whether *all* cases of interstitial keratitis are due to specific trouble, there is no doubt about the insufficiency of purely local treatment, and the always satisfactory nature of the combination of such treatment with the administration of iodide of potassium or of mixed treatment; it is the correction of the constitutional disorder in these cases which cures the disease.

We have certain ocular manifestations of scrofula or some allied constitutional diatheses, which give a very characteristic picture. The diagnosis in such cases can usually be made at a distance and at first glance. Such pictures are very frequent in dispensary practice. The reddened, swollen, and moist lids with adjacent patches of eczema, the sore and running nose, the thick-lipped mouth, together with the head bowed down on account of the photophobia, give us a combination of symptoms, of which the ocular trouble is

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usually regarded as the most serious; and frequently no medical advice is sought until there is added to the other evidences of the scrofulous diathesis the disease of the eye. We have then a complexus of ocular symptoms to which the term "*scrofulous ophthalmia*" is often given, and the name is a good one—a combination of conjunctivitis, blepharitis, and keratitis; whether conjunctivitis or keratitis, it is apt to be of the phlyctenular variety, a form characterized by the occurrence of small pustules upon the ocular conjunctiva, upon the cornea, or at the junction between these two. Such phlyctenulæ are merely local manifestations of an interference with the general health and nutrition of the body.

Local treatment in these cases scarcely subserves any other purpose than that of cleanliness and disinfection; we are dealing with small ulcers, which follow the pustules, and hence it is but the enactment of the most rudimentary surgical principles to keep such open surfaces clean. But this does not cure the condition, and it is only after proper attention has been given to diet, exercise, fresh air, bathing, and other hygienic surroundings, frequently aided by the administration of syrup of the iodide of iron or compound syrup of the hypophosphites, or both, for some time, that the occurrence of these small ulcers, these phlyctenulæ, is prevented. It seems to the writer that there is considerable analogy between the occurrence of phlyctenulæ and of styes; they are both found most frequently in children; among the better classes, styes are the more common; among the lower and poorer classes, phlyctenulæ seem to occur the more commonly, as an expression of a constitutional disorder.

We know that the healing of an ulcer in any part of the body is influenced very considerably by the state of the system; but in no portion of the body have we such excellent opportunities for studying this fact as in the cornea. It will be interesting to consider some of the many forms of corneal ulcers, and to observe how they are influenced in their progress and characteristics by the state of the system. A small

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abrasion occurring upon the cornea of a person in good health heals rapidly, and nothing remains except an insignificant opacity—often this is wanting if the injury was quite superficial; but a similar corneal abrasion in a feeble, poorly-nourished, and anæmic individual, debilitated from same cause, or about convalescing from some decidedly enfeebling disease, is quite another matter—there may, then, be a tendency to spread, to increase in depth, and to convert a wound of no importance into an enlarging ulcer with grave consequences; the constitutional change has made this difference.

Other examples are furnished by the ulcers of the cornea certainly influenced in their course, if not dependent upon, malaria, or upon rheumatism and gout. Probably in all these cases there are exciting causes, and the various general conditions just alluded to are only predisposing. But it is quite certain that there are such ulcers which do not heal until the proper constitutional treatment has been employed —until quinine has been administered in large quantities in the malarial cases, and until salicylic acid or iodide of potassium or colchicum, or both the last, have been taken in sufficient doses in the rheumatic or gouty examples.

The obstinate ulcers of the cornea occurring in the aged —senile ulcers—will be modified in their course, and their cure will depend largely, if not entirely, upon the extent to which the physiological debility of this period of life can be fortified.

The iris gives us very marked examples of how much systemic conditions influence the course of diseases of the eye. The most important part of the treatment of iritis, as necessary as the instillation of atropia, is the administration of remedies which shall neutralize the constitutional disturbance which has caused the trouble. Very little would be accomplished without the internal treatment of the rheumatic or the syphilitic condition which has caused the local inflammation. In the acute and chronic forms of iritis, this systemic influence is beautifully shown in the almost con-

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stant and the rapid effects of the pronounced use of alcohol. It is more difficult to cure iritis in alcoholic subjects, and many of them, when cured, find that any over-indulgence in drink is followed by some irritation suggestive of a mild sort of relapse.

Of conditions and changes of the eye accompanying diseases of other parts of the body, or of the system in general, many examples could be given; but such connections are so well known that it will be sufficient to mention, by way of illustration, the retinitis occurring in the course of Bright's disease; the retinal hæmorrhages occurring in pernicious anæmia, leucocythæmia, etc.; the changes in the lens and retina as a result of diabetes; the choroidal changes in pyæmia, and the many changes due to syphilis.

Turning from the diseases proper of the eye—*i. e.*, the conditions accompanied by structural changes—a few considerations regarding the influence which the constitutional factor has upon errors of refraction and functional troubles may be of interest.

Such functional errors of the eye are undoubtedly influenced by systemic conditions.

Many cases of hypermetropia are comfortable throughout life, and neutralize the optical defect by efforts at accommodation until something occurs which makes such accommodative efforts fatiguing. This is why hypermetropia often apparently develops in cases of convalescents from fevers, and other lengthy diseases, and in invalids.

This shortening of the antero-posterior axis of the eyeball, upon which the hyperopia depends, had probably existed throughout life; formerly, the neutralization by accommodation was no effort, and was satisfactory; but now, with diminished strength, anæmia, etc., characterizing the convalescing period, the patient is no longer equal to this additional effort, and thus hypermetropia becomes *manifest*. After some months, when the person is as strong as he ever was, it often happens that he again discards the glasses prescribed for him, and his hypermetropia again becomes latent.

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A similar instance will be interesting in connection with presbyopia. This physiological change in the lens usually begins to assert itself sufficiently to inconvenience the patient after forty years; but there are cases, convalescents, for instance, in which it begins much earlier. One case, the writer remembers very well, was in a widow of thirty-five, who had lost her husband after many days of anxious nursing; there was no hyperopia, but presbyopia, developed at this very early age, hastened by the general debility from which she was suffering.

Asthenopic symptoms, occurring in patients with very slight errors of refraction, as, for instance, those cases corrected by a very weak convex glass, say + 0.50 D., or a very weak cylinder of 0.50 D., are very frequently associated with some constitutional error; often in such cases the administration of iron and tonics for the correction of an existing anæmia will be of as much service as the proper glass. The application of such weak spherical or cylindrical glasses should not, however, be under-estimated; for though a slight amount of astigmatism is physiological, its correction often is most satisfactory; and incidentally it may be remarked that the correction of this physiological astigmatism by combining a + 0.50 D. cyl. ax. 90 with whatever glass is indicated for the presbyopia, will be appreciated by four cases out of five, even though no asthenopic symptoms existed; for they will be able to use the eyes longer in reading, and with less effort, than when an ordinary spherical glass is prescribed.

In myopia, especially in children, we often do well when we forget about the eyes for the time being, withhold glasses, and concentrate our energies upon details tending to increase the health and strength of the patient; in this way, we frequently have it in our power to prevent an ordinary case of myopia from becoming a progressive one with marked choroidal changes.

Hysteria furnishes an interesting example of the effects of a constitutional condition upon the exercise of the function of the eye. Hysterical young females often complain

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of asthenopic symptoms; these may be the same in nature, and may require the same correction as in patients who are not afflicted with hysterical tendencies. But sometimes, in these cases, the symptoms seem rather fanciful; the sight may be impaired without our being able to find any error of refraction or any cause to account for this diminution of vision; they may see only $\frac{20}{40}$ or $\frac{20}{50}$; and when we apply a glass, it seems to make no difference whether this be a weak convex or a weak concave glass, or even window glass—vision will be increased to normal; there may be no attempt at deception on the part of the patient, the improvement in sight being merely due to the temporary removal of a constitutional effect showing itself in the eye. This also, it seems to me, is the explanation of the remarkable cases recently reported at the meetings of certain medical societies of New York, in which the patient's vision was markedly increased whilst in the hypnotic condition. Such cases may have been examples of myopia, with spasm of accommodation, which would, by nature, increase the effects of the myopia; during the state of hypnotism, this spasm disappeared —hence the improvement in vision.

As a final example of the relationship expressed by the title of this paper, the subject which is now attracting considerable attention among oculists—the muscular insufficiencies and the symptoms dependent upon them—give instances of such association between constitutional condition and local eye symptoms. There are very few cases in which the ocular muscles are in a state of perfect equilibrium; in nine cases out of ten in which no symptoms are complained of slight insufficiencies, especially of the internal recti muscles, will be found; yet there is no complaint. But if, from any cause, the general condition of the body becomes poorer, the ocular muscles will lose in tone in the same manner as the muscles of the rest of the body; this will cause an increase in the unbalanced condition of the muscular apparatus of the eye, and now an insufficiency great enough to seem to require correction by prisms will show itself.

In many of such cases, the constitutional treatment, con-

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sisting of the employment of tonics, and especially of strychnia, will be quite as efficacious, if not more so, than the use of prisms.

Hoffman Arms, 59th St. and Madison Avenue.

ART. VI.—**Hysterorrhaphy.***

By W. HAMPTON CALDWELL, M. D.,

MEMBER OF SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, ETC., ETC., ETC.

At this day of advanced surgical treatment of uterine displacements many radical cures are being made daily, which the most advanced gynæcologists of a few years ago would have regarded as fatal to the patient, and the reputation of the surgeon advising them.

In considering briefly the various plans of treatment for the retroflexed uterus, none have given so great satisfaction both to the surgeon and the patient, as the operation commonly known as hysterorrhaphy. In cases of retroflexion, with extensive adhesions, resulting from past inflammatory conditions of the uterus and its appendages, this operation has found a warm welcome with the surgeon who is bold enough to put it into practice. To Dr. Howard Kelly, of Baltimore, Md., a most brilliant and gifted young surgeon, must the credit be given for bringing this operation to its present favorable status.

The name *hysterorrhaphy* (signifying "suturing the uterus"), has been suggested by Dr. Kelly, and indicates the process of fastening this organ to the abdominal walls by means of sutures or ligatures, passed around the ovarium ligament instead of passing through the broad ligament, uterus, or about the round ligaments, as was the plan with other surgeons heretofore. The object and plan of the operation, as described by Dr. Kellv, is as follows: Hysterorrhaphy is the operation for the correction of the mal-position of the uterus by suturing it to the abdominal or pelvic walls. It is a surgical procedure involving, first, an ab-

* Read before the Lexington and Fayette County Medical Society.

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dominal section, low down in the median line; next, the elevation of the corpus uteri, out of the sacral hollow, with a separation of any adhesions binding it down; and finally its fixation by a series of sutures passing through the body of the uterus, or near its side, and into or through the abdominal walls.

Dr. J. Marion Sims, some twenty years since, expressed a favorable opinion of this plan, but never carried it into practical use; and it remained for Lawson Tait to make a practical test of this operation in 1880, by passing a suture through the fundus uteri, and fastening it to the abdominal wall, after removing the appendages, in a case of ovaritis, complicated by retroflexion.

Six years afterwards, the brilliant young surgeon, Dr. H. Kelly, placed America in the advance of the world, by introducing the plan of stitching the ovarian ligament to the abdominal walls, for the purpose of replacing and keeping in situ a retroflexed uterus. In 1886, Dr. Kelly made his first hysterorrhaphy on a patient who had undergone two previous laparotomies. In this operation, he demonstrated the advantage of passing the ligature around the ovarium ligament, an idea which I believe to have been entirely original with him, and a plan which has proven to be more satisfactory, in its ultimate results in keeping the uterus in situ, than all others yet known. It has been the custom of other operators to suspend the uterus usually by the round ligament, or the body of the uterus itself. The majority of cases operated on in this way have not given satisfaction, as the support given the organ by these attachments does not seem to keep the uterus in situ, owing to the stretching, etc., of tissues by which it has been fastened to the abdominal wall.

The advantages of hysterorrhaphy may be more satisfactorily understood by giving the symptoms calling forth and the results following an operation which was performed by Dr. B. C. Miller, assisted by myself, a short time since. The symptoms given and statements made by this patient on entering our private hospital are as follows:

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Age 29. Had been a great sufferer for the past seven years from pain in back and hips; great pain during menstruation, and a constant desire to go to stool; was stubbornly constipated; had never had children, but one miscarriage at four months' stage of gestation four years since. She complained of being sick at the stomach almost constantly, a symptom which could not be relieved by any medical treatment. She had been reduced in flesh, during the past two years, to almost one-half her former weight. An examination revealed the fact that the uterus was retroflexed, resting and pressing directly on the descending colon, to which adhesions had already bound it fast. The ovaries were somewhat tender on pressure, but did not seem to be abnormally large. In this case, various medical agents were administered without apparent benefit.

Her consent having been secured, an operation was performed in the following manner: The abdomen was opened to the extent of two inches just above the pubis, and in the median line. The adhesions, which were found to be considerable around the ovaries and posterior surface of the uterus, were carefully broken up, and the uterus, with the ovaries, brought up to a marked anteflexed position, pressing gently against the abdominal walls; four silk ligatures (two on either side) were passed around the ovarian ligament at a point two-thirds distant from the uterine attachment. These ligatures were then brought up and secured to the deeper tissues of the abdominal walls on each side of the incision of the median line. The abdominal wound was brought carefully together by eight silk sutures, and with adhesive strips as additional supports, with a pad of absorbent cotton over the wound. The operation was completed in about 25 or 30 minutes. This patient made a rapid and uneventful recovery, leaving the hospital in three weeks. Six weeks afterwards, she resumed her household duties, entirely relieved of her former aches and pains.

I have frequently seen this patient since, and a vaginal examination reveals the cervix uteri far back in the pelvis, and the fundus yet snugly resting against the abdominal walls.

It has been my privilege to assist in this operation eight different times during the past twelve months, and also to examine several patients that had been operated on by my associate, Dr. B. Curtis Miller, two years ago; and in each

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and all of these cases I have found the uterus in a most favorable position, the former symptoms greatly improved, and, in most instances, entirely relieved, not excepting two patients who had become pregnant and given birth to children at full term since the operation was performed.

ART. VII.—**Sepsis, its Cause and Prevention.***

By C. B. HARGROVE, M. D., of Norfolk, Va.

No physician should attempt the care of a wound, however small, without some definite idea of sepsis, what causes it, and how it is to be prevented. If he is not familiar with this, he is liable to fall into some grave error that endangers his patient's life and risks his own reputation. This, too, is not less interesting to the obstetrican, as puerperal fever is a true septicæmia, the result of a septic influence.

The gynæcologist is as much under obligations to know its pathology as the obstetrician, thereby preventing endometritis, metritis, localized peritonitis, etc. Even the strict practitioner is not excusable for ignorance in this matter, for many general fevers, as typhoid, typhus, etc., have a septic origin. Many diarrhœas are thus caused, and they use their antiseptic remedies for them. Our specialists on the eye and ear, never operate, I am sure, without first sterilizing their instruments. So you see that no one can well practice any branch of medicine without some knowledge of sepsis, though the surgeon is the one especially interested.

The word *sepsis*, is used by many to mean the same thing, as septicæmia, pyæmia, etc. But in this paper I will consider it as a local infection, and septicæmia, pyæmia, etc., as results of sepsis. I will, therefore, term sepsis as *wound infection.*

The body is covered by skin, and the digestive tract, urethra, etc., by mucous membrane. Both the skin and mu

* Read before the Norfolk Medical Society, February 5th, 1891.

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cous membrane are covered by a layer of epithelium that is so arranged that without some rupture of its continuity, no germ can gain access to the body tissues. Therefore, for septic infection, a wound of this epithelium is absolutely necessary, let it be even so small as a pin scratch.

First of all, then, for sepsis, there must be a wound. If this wound be an aseptic one, we see it healing by first intention or primary union. But let it be exposed to the atmosphere, which is loaded with dirt and micro-cocci of various kinds, we see it getting red, exudation taking place, and other signs of inflammation which precede suppuration. If the number of cocci be few and the patient's health good, we see the white corpuscles of the blood rushing to the place of attack, where they make battle upon the invading enemy, and extinguishing them as it were. But if the micro-organisms are too great in number, they overcome the corpuscles, and then make farther invasions upon the tissues of the body.

From every wound we have exudation, and it is upon this that the cocci are first deposited. Unless they are overcome by the leucocytes—being foreign bodies—by their irritation, they cause an increased exudation into the surrounding tissues—this exudation serving for an increased soil for production of the germ. This exudation also presses upon the surrounding tissues, thereby stopping circulation, which causes necrosis of the tissue. Thus a more extensive area for developing the germ is prepared. This process may be hedged in as it were by an organized wall of lymph, which is formed by lymph exuded externally to the putrefying material, and coagulating. New capillaries are formed in this before it becomes infected by the pus microbes. This may stop farther extension of putrefaction, and the putrefying material being thrown off, the wound heals by granulation.

But this way of ending is rare; generally we have the micro-cocci taken up by the lymphatics, and we can view their course by the little red streaks along the direction of the lymphatics, and by an occasional enlarged gland.

If the germs are purely of the staphylo-coccus variety, we

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generally have the process localized, as in case of an abscess; but if of the strepto-coccus variety, they are in chains, and usually follow the course of the lymphatics.

It would be too taxing upon your patience to give you a description of the various germs that cause inflammation and suppuration, the different kinds of bacilli, bacteria, the staphylo-cocci, strepto-cocci, etc.

Suffice it to say, that suppuration is due to the action of specific micro-organisms upon the tissues, and one only or many varieties of cocci may be present.

Etiologically, all suppurating processes constitute more or less unity, the various differences being caused by a more or less severe infection, or greater or less resistance on part of patient. But it hardly suffices to simply state that a wound is infected by micro-organisms, and that they are the whole sole cause of all the resulting troubles, and therefore proof may be required by some of us.

This proof is derived both clinically and experimentally. We hardly want any better proof than that derived by aseptic and antiseptic surgery. Operations are daily done now under antiseptic precautions that were not dreamed of a few years ago. The peritoneal, pleural and even pericardial cavities, are opened now without hesitation, and if properly done, no evil results accrue. Take a suppurating wound and note the great change that is brought about by properly cleansing and providing against further invasion. What better evidence do you want than observing the good results that follow a wound inflicted by the surgeon's knife, compared with one from some other cause, as by a razor at a fancy ball, two or three days elapsing before patient seeks the aid of a doctor. When I first entered the hospital, in the spring of 1889, I was placed in the woman's ward, and had under my care an old woman suffering with senile gangrene commencing in her toes. It had then reached the middle of her foot. I also had in my charge a young girl suffering with erysipelas of the face. I had to to dress and look after both, and any of you can easily guess the result. The old woman soon went to the dissect-

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ing room. I did not know much about antisepsis then nor the communicability of septic diseases. I had been told of it often enough by our able surgeon, Prof. Tiffany, but had not grasped its fullness.

In a well conducted hospital, no surgeon will have assistants from a ward that contains measles, scarlet fever, erysipelas, or other contagious diseases. Nor will a student while dissecting be allowed to assist at any operation, or to attend at the lying-in hospitals. Every obstetrician recognizes these troubles as causes of puerperal fever. The conveyance of cellulitis from one patient to another by means of syringes, basins, etc., is familiar to every one that has had hospital work to do. But enough of clinical experiences. Let us review what experiments have done.

It is a well recognized fact that a piece of meat put in a jar, and so placed that no dust can fall on it, or is stopped by a piece of cotton, which is the best filter to prevent the entrance of germs, will not putrefy, and the putrefaction of meat and suppuration of a wound are due to one and the same cause. Germs obtained from a sore and cultivated, always produce a similar sore when injected, and the same germ is recovered on examining the secretion of second sore.

There are those that believe that the pus formed in a wound is due to ptomaines; and with this object in view, experimenters have obtained the ptomaines from sterilized cultures, and in capsuling it, have placed it under the skin of animals, and after thorough healing, have broken the ends of the capsules, and after a time examined the outcome. The result generally is the finding of pus without any microbes. This is always limited, because the ptomaines are limited. In case of a wound, we have these microbes increasing; therefore the production of ptomaines continues to increase. But whether the suppuration is caused by the ptomaines or germs, is immaterial with the surgeon, as the germs must be present for the formation of the potomaines.

Toxines of various kinds are produced by the germs of suppuration, and it is this that causes all the trouble. In

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the case where the germs are localized, we have ptomaines forming and being absorbed. This gives rise to high fevers, chills, and other symptoms of systemic intoxication, and constitutes what is known as sapræmia. If the germs are removed, and further production and absorption of ptomaines prevented, we have that that is in the system eliminated, and the improvement of the patient as a consequence thereof.

But the cocci that gain access to a wound may not remain confined to the wound, but, by means of lymphatics and venous capillaries, gain access to the general circulation, and constitute what is known as systemic infection.

Not only are the ptomaines of the local wound absorbed, but the cocci that have gained access to the blood continue to produce them; and this is what constitutes septicæmia or pyæmia, the latter being the same as the former, with metastatic abscesses forming in different places.

You may sterilize the local wound, but you only reach the rear-guard, as it were, and those in the circulation cannot be gotten at, and therefore this form of blood-poison usually terminates fatally.

I remember very distinctly a patient operated on in the hospital, and on the second day he was taken with what was thought to be rheumatism, and for such was treated for a day. Then the wound was opened, and thoroughly cleansed, but in the wound there were no signs of inflammation at all. Patient died on evening of third day of acute septicæmia.

This, no doubt, was due to a defect in the operation, and the microbes were taken up by the veins directly into the circulation, and patient died before local signs of disturbance could take place.

But whether the germs be confined to the local place of inflammation, or have gained access to the general circulation, the systemic effects are due to one and the same cause, ptomaines formed by the micro-organisms.

Germs were thought to be the cause of suppuration long before they were found in the secretions and pus. In fact,

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it was upon this theory that Lister brought about such radical changes in the domain of surgery, and made operations possible that were thought to be impossible before. He undertook antiseptic surgery before it was known that germs caused so much trouble, and upon his brilliant results was founded one of the strongest points of evidence in favor of the germ theory.

The prevention of sepsis is not less interesting than the cause, for we only learn the cause to learn its prevention. In preventing sepsis, we also prevent other infectious diseases, as tetanus, hydrophobia, etc., the germs of which gain access to the system through ruptures of the above described epithelium—therefore through wounds. I believe, too, that these troubles are really forms of septicæmia; the toxines produced by the germs having selective action upon special tissue of the body.

The prevention of sepsis is accomplished in two ways: by asepsis and antisepsis.

By asepsis, we mean the absolute exclusion of germs from a wound.

By antisepsis, we mean the destroying of germs that have, in some way, gained access to the wound.

Could we only get complete asepsis, there could be no need of antiseptic precautions, for then there would be no germs to destroy. But we generally bring both into use, and hope that our antiseptic remedies will reach those germs that have escaped our aseptic precautions.

Always clean yourself before you start an operation, or deal with a wound of any kind. Same also as regards those that are to assist you. Have off your coat, and roll up your shirt sleeves above the elbows. Wash your hands and arms well with soap and water, and do not spare the nail-brush, thereby removing all the germs that may be placed away beneath the nails or hiding in the cracks and crevices of the skin. Then rinse them with an antiseptic solution. See to it that your assistants do likewise. It is well to have aprons to operate in, and have them washed after each operation.

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Your instruments must be aseptic; and to obtain this, clean and boil each time after using. Eye and ear surgeons frequently sterilize their instruments just before using by passing them through an alcoholic flame. This is the best method of sterilization.

First, we will deal with wounds that are already inflicted. These are, as a rule, already infected when they come to us.

We, after cleaning ourselves, examine the injury and see the amount of damage inflicted, and decide what is to be done. Then we prepare our patient for operation. Wash out the wound thoroughly, and cleanse neighboring parts well with soap, water, and nail-brush. Use absorbent cotton to sponge with, as sponges are liable to be infected, and it is rare that they are properly cleaned.

Irrigate wound with some antiseptic solution, of which there are many; but I will mention bichloride of mercury as a type. This is used in various strengths, but generally about 1.2000. The strength varies with locality of operation. In case of serous cavities, the antiseptic solution should be very mild indeed, as they absorb readily, and you may kill patient instead of germ. In these parts, we get as perfect asepsis as possible, using boiled water to wash parts with.

The operation is completed after the above precautions, and wound is ready for dressing. We have, by aseptic and antiseptic means, tried to remove all the germs present, and now proceed to dressing.

If wound is a lacerated one, drainage is always to be provided for by proper methods, as is the case with an uncomplicated cut, if you have reason to believe that wound is very much infected, and some inflammation is liable to take place. Even lay parts more widely open if necessary. Dust wound with iodoform (or aristol, according to wealth of patient,) and pack with iodoform gauze, if necessary. Over this apply plain gauze or absorbent cotton and proper bandages.

But a wound that isinflicted before it comes to us is al-

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ways more or less infected, and we are not entirely responsible for the outcome.

But in case of a deliberated operation, we are more or less fully accountable for the result, for we, almost in every instance, have the exclusion of the infection germ under our control. Here, to some extent, we have the choice of our operating department, and we should choose one, if possible, that is free from dirt, well-ventilated, and sufficiently commodious. It would be well that there be absent heavy window-curtains, carpets, etc., as dust rising from these is ladened with the dreaded micro-cocci.

Use soap, water, and nail-brush, not only on parts to be operated on, but on surrounding parts.

If operation is about head, or anywhere that there is a collection of oily secretions, it is wise to apply turpentine, and follow this with soap and water. Then irrigate with antiseptic solution and wrap parts in towels soaked in same solution for an hour or so before the operation.

It would be tiring to follow out each step of procedure, as all of you are familiar with them.

I will simply say, let nothing touch the wound that you believe to be septic. Be polite to patient, and kindly ask the doctors that are looking on, and not assisting, to keep their hands off.

Where there will be very much exudation, it is well to prepare for drainage. Each operator must decide this for himself.

Dress, etc., as above directed. When the dressings become saturated with exudations, then the wound is to be redressed, as the germs will become lodged in this, and quickly, through its medium, will gain access to the wound. Avoid dressing as much as possible, as each time wound is exposed, it is liable to become infected.

In closing, I will say that nothing does so much good in operating as the thorough and judicious use of soap, water, and nail-brush, both on yourself and patient.

Nothing does so much harm as a dirty doctor.

94 *Main Street.*

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Clinical Reports.

A Case of Intussusception.*

By JOHN T. FRANCIS, M. D., of Norfolk, Va.

M. L., aged twenty-two months, had, at eighteen months, during the eruption of the upper incisors, retention of urine lasting some hours, but relieved by hot baths and Dovers' powder. Beyond this, she had never had any illness.

Early in the week in which the invagination occurred, she had a slight diarrhœa. This was readily controlled by correcting the diet and the exhibition of a little bismuth with creta preparation after each action.

On Wednesday, the improvement was such that even this slight medication was discontinued.

On Thursday evening, she had a large, thin, but fairly good action, with considerable straining, but without marked pain.

Towards 3 A. M. Friday she began to grow restless, and slept very little from that hour. I saw her about 8 A. M. She had passed no water since the night before, and it was thought by the mother to be a repetition of the attack above noted. The little patient seemed free from acute pain; and beyond her restlessness, there was no indication of discomfort. She had, at 7 A. M., a very good action without straining, but passed no water. There had been no nausea or vomiting, and no fever. The abdomen was full, but not distended. But there presented a globular tumor just above the symphysis-pubis; the tension of the recti muscles seemed considerably increased; slight pressure gave rise to considerable pain.

The diagnosis of the mother was accepted as being probably correct, and accordingly the patient was put in a warm bath, the water coming well up to the umbilicus, affording marked relief, and, upon being taken out, was given a Dovers' powder. At 11 A. M., patient had been quiet and apparently comfortable, but had passed no water. I introduced a small catheter into the bladder, but only succeeded in drawing off about a tablespoonful of water, making it quite clear that it could not be retention of urine, and must be obstruction of bowels—probably invagination. The abdomen was somewhat distended, and the tumor of the morning could, with difficulty, be made out. Examination by

* Reported to Norfolk Medical Society, January 8th, 1891.

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the rectum revealed nothing. A small prostatic catheter was passed into the bowel, some ten inches, without difficulty, and without inducing pain or straining. No fæcal matter was attached to its point upon withdrawal. Hot fomentations were applied to the abdomen, and about a pint and a half of warm water was thrown into the bowel through the catheter.

At 1 P. M., when Dr. H M. Nash was asked to see her, the abdomen was tense and hard all over, and painful to the touch. He confirmed the diagnosis, and advised the use of hot water after the method employed by Forest. The nozzle of the fountain syringe, with a long rubber tube attached, was tightly wound two inches from its point with a roller bandage to make a shoulder, and introduced into the bowel, and the shoulder pressed firmly against the anus, preventing leakage. The rubber bag of the syringe, filled with water, was gradually raised to the height of 12 feet, and a steady and uniform pressure of about five pounds to the square inch was thus secured and maintained for twenty minutes, with no change in the condition of the patient. This manœuvre was repeated at intervals throughout the afternoon, the height last reached being 16 feet, but failed to overcome the obstruction. 6 P. M., no change. Temperature, 100°; pulse, 120. Had taken a small quantity of milk. 11 P. M., temperature, 102°; pulse, 130. Abdomen hard and enormously distended. Tincture of opium, gtt. iv, administered per rectum.

Dr. H. M. Nash again called in. In an hour, gtt. viij of laudanum were given as before. This dose was gradually increased until 4 A. M. Saturday, when tr. opii camph. ʒss, tr. opii deod. gtt. x, chloroformi gtt. x. were given by the mouth, and for the first time the child slept.

In the "*Columbia Hospital Reports*," for the year 1873, Dr. J. H. Thompson, in recording a case of obstruction of the bowels by impacted fæces, sets forth the theory, which he credits to Dr. J. H. Baxter, U. S. A., that the obstruction would be overcome by diminishing the contraction of the circular fibres of the muscular coat of the intestines, that the circular fibres are mainly under the control of the sympathetic nervous system; that atropia exercises a special influence upon the sympathetic; and if administered in sufficient doses, will cause a complete relaxation in the circular fibres throughout the entire intestinal tract. Upon this re-

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port was founded the successful treatment of a number of similar cases by Dr. Nash, and he therefore suggested its use here, by suppository, one-fiftieth of a grain each every four hours.

At 8 A. M., the first suppository was introduced into the bowel. Temperature now 102½°; pulse, 138. Respiration, hurried and confined to upper chest. Face, feet and hands swollen; extremities cold; abdominal distension increased—the superficial veins standing out prominently by reason of impeded circulation. Abdominal section considered, but postponed because of the well-known fact that children bear very badly the shock of opening the abdominal cavity. 12 M., suppository of atropia. 2 P. M., suppository of pulv. opii, gr. ¼, and ice-cap applied to head.

The employment of carbonic gas made by the well-known method of introducing the alkali and acid of a Seidlitz powder separately, and allowing the evolution of gas to take place in the bowel, occurred to me. I was aware that this step had been condemned on account of the danger such an uncertain force might give rise to, but concluded that the danger to be feared from such evolution of gas would be minimized with the circular fibres thoroughly relaxed.

4 P. M.—Pupils dilated; face flushed; temperature, 103°. The prostatic catheter was introduced into the bowel about six inches, and through it thrown the two parts of a Seidlitz powder separately. It caused no pain, and the fluid returned clear. Suppository of atropia. 8 P. M., had passed water freely; abdomen slightly softer; breathing deeper and frequent. Seidlitz powder as before, followed by atropia suppository. This treatment was continued every four hours during the night, with suppository of opium gr. ¼ sufficiently often to control pain and produce quiet. Swelling of face, hands and feet gradually subsiding.

8 A. M. Sunday.—Less distension and tenderness of abdomen; no tumor to be made out, but abdomen decidedly harder just above pubis. Temperature, 102°; pulse, 130. Seidlitz powder given as before; some wind passed through catheter, and the fluid was, for the first time, discolored, with here and there a few greenish flocculæ.

10 A. M.—Abdomen decidedly softer; respiration deeper and less labored; pulse quick, but stronger. Absolute quiet; no opium since 6 A. M. Ice-cap discontinued. 12 M.—

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Resting quietly. Temperature, 101°. Seidlitz powder; considerable wind; more flocculæ; atropia suppository.

8 P. M.—Quite a good action, with returning fluid of Seidlitz powder; atropia suppository. The child had now taken, since 8 A. M. Saturday, something more than a third of a grain of atropia.

At 9 and at 10 P. M., had small yellow voluntary movements. 12 M.—Suppository cut in half, and one-half inserted in the bowel. Had been given during the night, hourly, sodii bromidi and chloral, each gr. ij., to control the nervousness induced by the atropia. A large yellow movement, at 2:45 A. M., assured me that the invagination had been reduced. 4 A. M.—Very restless. Nose discharging freely. Pulse, 128; temperature, 100°. Lies entirely on right side; neck and arms stiff, any effort to move them causing pain. Pulv. opii, gr. ¼, in suppository. Large yellow movement at 5 A. M. The bromide and chloral were continued several days, at irregular intervals, to allay nervousness, until recovery was established.

It will be noted in this case that the obstruction was overcome gradually; and further, the absence of all the more prominent and characteristic symptoms of invagination, as commonly laid down in the books. The diagnostic symptoms of obstruction, due to foreign bodies, volvulus, intussusception, and constriction, were oddly mingled. No vomiting, no tenesmus, no diarrhœa or discharge of blood-stained mucus. A tumor there was, but it did not follow the course of the colon, changing its position. Pain acute and constant—not paroxysmal—increasing and diminishing. We know that volvulus is very rarely the cause of obstruction, and that death follows with absolute certainty unless relieved by surgical means; so also laparotomy is the only means of overcoming constriction. There was no history of swallowing a foreign body, and none appeared in the stools.

Bromidia is used more to-day than ever. It is reliable and never fails in its action.—*Canada Lancet*, January, 1891

Do you know the theory of reconstruction by the Hypophosphites of Lime and Soda? If not, read the advertisement on white card-board page, and send for a pamphlet.

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Proceedings of Societies, Boards, etc

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

January, 1891, *Meeting.*—The President, Dr. Henry M. Wilson, in the chair.

Dr. W. P. Chunn related an instance of

Apparent Growth of Placenta After Labor.

The patient, æt. 28 years; married five years; no children at full term, but had had three miscarriages; first two miscarriages occurred at about the fourth month of gestation. The last occurred about May 10th, 1890. She had missed one period, and believed herself about six weeks' pregnant. On May 10th, she began to have bearing-down pains, hæmorrhage, with expulsion of blood-clots, lasting three or four days. Then the pain subsided, the hæmorrhage ceased, and he regarded the uterus as empty. On 12th June, however, she was again seized with violent pains, and during the night was delivered of a placental mass larger than a man's fist, which he saw the next morning. The fetus was searched for, but no sign of it was found.

Dr. Thomas A. Ashby has seen a somewhat similar case. The patient began to have hæmorrhages about the sixth week of gestation. He was called in four weeks subsequently, and she was then in the act of throwing off the fetus. At the time of its removal, the fetus was apparently at the sixth or seventh week of gestation, and partly decomposed. The placenta was not affected by decomposition, She had been going around bleeding from this cause, and was not aware that she was about to abort. She had had five miscarriages between the sixth and eighth week in twenty eight months, so she stated.

Dr. G. W. Miltenberger has known the whole ovum to be retained for months after the death of the fetus. In a recent case the contents of the uterus were not thrown off till full term, though the fetus was dead at the third month. He does not understand the growth of the placenta in utero after the death of the child, but can conceive of the growth of the placenta outside the uterus on account of the peculiar relation of the blood vessels.

Dr. L. E. Neale thinks it unfortunate that the specimen is not presented. The placenta is not developed at the sixth week of pregnancy, The conditions in extra uterine pregnancy are very different from those in intra-uterine preg-

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nancy, and what is true of one regarding placental development is not true of the other. There is nothing in the history of the case opposed to the belief that it was a very ordinary case of abortion (not miscarriage), with escape of the embryo, and more or less complete retention of the sac, chiefly chorion that might have been removed by the curette long before it was ultimately expelled.

Dr. L. E. Neale read a paper on

The Indications for Cæsarian Section.

This paper is a plea for this operation, *versus* craniotomy. Craniotomy upon the living fetus is believed justifiable, but only as a dire necessity, and not as an elective procedure, and should not be resorted to when there is a reasonable probability of success by the section, and the uncoerced consent of the mother can be obtained. No man is compelled to do craniotomy upon the living fetus solely upon the choice of the patient or her friends.

If seen early enough, the induction of premature labor at the thirty-second—thirty-fourth week by the method of Kramer—was a very strong antagonist to craniotomy upon the living fetus. The range for this operation should not extend to a conjugata vera below 2¾ inches (7 cm.) or to one above 3½ inches (8.75).

The indications for the conservative section included all insurmountable obstructions to the delivery of the living and viable child per vias naturales. They include tumors, pelvic exudations, hypertrophic elongation of the cervix, cicatrices, stenoses, tetanus uterus falciform, uterine contractions, etc. He believed general opinion placed the limit for the absolute indication at a conjugata vera of 1½ inches, or 3.75 cm., and the relative indication extended from that point up to an undermined conjugata vera measurement, and included many other conditions besides pelvic contractions. Other things being favorable, a 2½ inch or 6.25 cm. conjugata vera (Harris)—3 inch—7.5 cm. conjugata vera (Lusk) called for section rather than craniotomy, but be warned against relying *entirely* upon pelvimetry in the relative indication.

In contracted pelvis, he preferred version to forceps when both were practicable. He insisted upon pelvimetry, and briefly outlined the methods. He believed it was chiefly by this means we could determine the indications for the section.

A conjugata vera of 3 inches—7.5 cm.—is generally ad-

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mitted to be the least through which a living child, of normal proportions, could pass, and, as Lusk maintained, if other diameters were lessened, or the contraction was not limited to the brim, it might require a conjugata vera of 3½ inches, 8 cm. or more.

No hard and fast line could be given; each case must be judged alone. The relative size of the head, its resistance, the past history, the uncoerced consent, the general condition and surroundings of the patient, etc., were all important factors in the relative indication.

The life of the child is not "purely impersonal and scientific," but eminently personal and practical, and he believed the mother should run a reasonable risk in its interest. The life-saving of craniotomy could never be as great as that of Cæsarian section. It started with a necessary mortality of 50 per cent, or half the lives at stake. But aside from all argument and comparative statistics, the section was decidedly restricting craniotomy. All deprecate the repeated performance of craniotomy on the same woman. He accepted Carl Braun's rules for the relative indication.

Craniotomy was safer for the mother than section; but piece-meal extraction was equally if not more dangerous—ex. 92 conjugata vera, 2½ inches, 6.25 cm., or less. If conservative delivery per vias naturales had been attempted and failed, this was a strong point in favor of craniotomy and against the section under these increased dangers. He strongly deprecated conservative tampering, and then resorting to the section. Many lives had been thus sacrificed. If we desired success, we must make the section an elective operation, and not a procedure of dire necessity.

Dr. Miltenberger said that the confusion and discrepancy of opinion have arisen from want of definiteness and clearness as to the relative indications. If we take the statistics of craniotomy generally, including all cases, we get no positive resulting data to guide us. Where the pelvis is so contracted as to necessitate the piece-meal extraction of the fetus, it is recognized undoubtedly as the most serious of obstetric operations, and more dangerous than Cæsarian section. Where, on the other hand, craniotomy alone is required, the operation is simple, and the danger to the mother in proper hands should not be greater than from the application of the forceps. On his own patients, he has been obliged to resort to craniotomy but twice in fifty years, and in these, as well as those in consultation practice, the mothers have all recovered.

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Now, it is just in this latter case that the doubt arises. The smallest conjugata vera diameter through which a living child has been expelled is 3 inches, or, as has been claimed, $2\frac{3}{4}$ inches, but with this we cannot expect to save the child through the natural passages.

But whether with this, or a little more avaialble space, we must recognize the prime and absolute importance, as the doctor states, of pelvimetry; and to its thorough practical study and application must we mainly look for increased certainty. Especially does this hold as to lateral pelvimetry, the best instrument, by far, being the hand of the obstetrist. While the measure here of the conjugata vera by the finger may not be perfectly accurate, and we require also to learn the available space in the transverse diameter, yet, with care, it sufficiently approximates the truth for our purpose. But, on the other hand, we cannot accurately determine the size of the child's head, its degrees of ossification, etc. By bimanual examination we can approximate the truth, but not exactly obtain it. He has known an accomplished accoucheur persist, for a length of time, in the use of forceps, before he recognized that he was dealing with a hydrocephalic head. Thus both the factors have elements of uncertainty. It is just in this class of cases that the doubt and uncertainty arises.

When the practical obstetrist meets with a case of dystocia, from this cause, by internal measurement he satisfies himself, as far as possible, that he has 3 inches of available space in the conjugata vera, or even above this, without a full knowledge of the size of the fœtal head, he naturally applies the forceps or proceeds to turn, and not improperly; but if he fails, he has already violated the first fundamental law in Cæsariotomy. To resort at first to the knife, without any previous operative manipulation, if such manipulation has been at all prolonged, the choice is not between craniotomy and Cæsarian section, but between craniotomy and a Porro. Fortunately pelves, contracted to this extent, are more in this country, particularly in the higher walks of life.

The operation of Cæsariotomy is, in itself, sufficiently simple, and the modern section is undoubtedly one of the greatest advances in modern obstetrics. In the hands of those skilled in its technique, and taught and trained by experience, there is every reason to trust and believe that the modern Sænger, will extend still further its successes, and that as an operator gains tact and knowledge with

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every case with which he deals, and as a part of the success must depend upon his absolute command of his patient and her surroundings, it is most likely the old picture will be reversed, and with our septic and antiseptic precautions, hospitals will offer a smaller rate of mortality than private practice.

Fully realizing, as he does, the success of modern Sænger, and the lessened mortality rate which has been achieved, yet we know that no abdominal section is entirely free from danger; and in these cases of relative indication, they may be claimed to be almost, if not entirely void of peril, with craniotomy. He does not hesitate to declare that he should perform the operation on his own wife, as the safer for her, craniotomy or Cæsarian section in such a case. He is, therefore, forced to the opinion that Cæsarian section will not completely supplant the old operation, and that there still remains a field, although markedly limited, for craniotomy on the living child.

Dr. J. Whitridge Williams would place the absolute indication at 5.5½ cm., or 3 inches, and the upper limit for the relative indication at 7½ cm., or 3 inches. Within these limits, unless the child be abnormally small, there should be no question as to the use of forceps; and the question to be decided is, whether craniotomy or Cæsarian section should be done. Theoretically, he would choose the section in all cases that appeared favorable; but, practically, he might craniotomize in the case of a primipara who had not been examined previous to labor. For in that case it might appear very hard to submit a young woman to run a risk without any previous intimation of her danger. But if he performed craniotomy under these circumstances, he would warn her that in becoming pregnant again she would take the responsibility of the child's life upon herself, and that he would refuse to perforate in subsequent pregnancies.

The mortality of the operation need not dismay us, for Munchmeyer has lately reported the latest statistics of Leopold, in which he reports 28 Sænger operations with the loss of three mothers and one child, and 7 Porro operations with no maternal deaths.

Dr. B. B. Browne had recently done a Cæsarian section. The woman was 27 years of age. She had one child two years ago, when she had convulsions, and a craniotomy was done, but the vagina and uterus sloughed, and there was complete atresia of the vagina. This atresia was afterward opened up, and she became pregnant. The vagina was

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contracted by cicatricial bands, and an opening could be felt in the side of the cervix, but to the left of the opening was a cup-sloped cavity which might have been the old cervix. In the recent pregnancy, she was not sure of the time of impregnation. She was swollen, and her urine solidified with albumen upon heating. Labor pains began December 20, and continued for one or two days, but there was no dilatation. She came to the hospital December 22. She had severe uterine contractions that day, and came for the purpose of having Cæsarian section done. But next day the pains had all gone. The night of January 1st the water broke, and severe pains began. The cicatricial bands about the cervix were cut, and Elliot's forceps were introduced. Both blades of Tarnier's forceps could not be gotten on. After several efforts, he concluded that she could not be delivered in that way.

In the morning, the fœtal heart was distinct; in the afternoon, it was feeble.

The section was made without difficulty. The placenta was attached in front. The child could not be resuscitated. The placenta was readily detached, and the uterus was cleaned out, and closed by the Sænger method. The operation was done on Friday, and the patient did well until the following Tuesday, when she sank rapidly, and died in a few hours.

The woman had grave kidney disease, and had little chance of recovery on that account.

In this case, several things are to be considered—

1st. The woman was perfectly willing for the operation.

2nd. Her life, from the condition of her kidneys, was not insurable, and the child had a good chance of living.

3rd. She had much difficulty in the former craniotomy, and barely escaped with her life.

Dr Ashby has witnessed two Cæsarian sections. One, the case of Dr. J. G. Jay, of this city, several years ago, and the recent case reported by Dr. Browne. He was impressed with the care with which the operation can be done. Its mechanical execution is certainly much less difficult than that necessitated by many intra-abdominal operations.

Hæmorrhage is easily controlled, and the closure of the uterine wound is not a difficult undertaking.

In the case of Dr. Jay, the mother made a prompt recovery, and the child perished simply because of the unavoidable delay before an attempt at its removal was made. Its death had, in his opinion, no relation to the operation, but

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to causes which antedated the section. The section, he thinks, bore no relation to its death. In this case the operation was skilfully done, and he is inclined to think that the mother's death should be assigned chiefly to her kidney complications. She was a bad subject, but bore the section well.

His opinion of the Cæsarian section is altogether favorable. It has come to stay, and with an improved technique and large experience, will be approached with less hesitation.

The operation of the future will be approached without delay, and before other methods have been employed.

The important indication for the operation rests upon careful pelvic measurements and discrimination in advance of any obstetric interference of the impossibility of delivery by version or forceps. If this is done, the section will be approached under its most favorable aspects, and its results will be far more satisfactory.

He would prefer craniotomy, if the patient were a member of his own family, but, upon scientific grounds, he would not hesitate to operate did his patient and her friends elect this procedure, having satisfied his own mind that a living child could not be born in any other way.

Dr. Neale totally and emphatically differs from Dr. Ashby, that any conscientious obstetrician should ever be forced to resort to craniotomy by the moral suasion of the patient or her friends. Such teaching would be extremely pernicious.

Analyses, Selections, etc.

Carlsbad Water and the Sprudel Salt.

Dr. William F. Hutchinson, of Providence, R. I., says that in the north-west corner of Bohemia, some 2000 feet above sea level, there lies a little hill town that climbs up sharply rising terraces on both sides of a swift mountain stream called the Tepl. It nestles from passing sight in the heart of great forests of pine and beech trees, and is full of legends of knights and ladies fair, that have visited its valley for six hundred years or more. With but 12,000 residents, it has a population of 30,000 every summer, the others coming from all parts of the world to avail

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themselves of its wonderful waters so gifted with healing power.

These springs of Carlsbad are so well and widely known throughout the civilized world, and have attained such high reputation everywhere, that extended description is not needed. The writer intends his paper only to call attention to a few case records collected from the mass accumulated during thirty years of constant use of these waters and their salts for a variety of diseases.

To obtain the best therapeutic results of medicinal waters, they must be taken at the spot whence they spring, where their administration can be controlled by the experience of resident physicians, and where Nature's forces of seclusion, rest and pure air are free to act as potent auxiliaries. But for all the world this is not possible; and, were the good that is done every year by the waters of these famous fountains alone, confined to sufferers who are fortunate enough to reach their home, great as that aggregate number is, only a small part of the large army of invalids that blesses their healing powers would ever have heard of them.

After comparing the effects of Carlsbad waters at the springs with those obtained from the same when taken in America, he is convinced that the only loss they sustain in removal, is that they do not bring in their neat bottles, the the air and regime of the Bohemian mountain spa. But so much of the latter as concerns exercise, at least, may be followed anywhere.

Free movement is one of the principal conditions necessary, particularly for those whose sickness was originally chiefly caused by a sedentary life. Suitable muscular activity promotes the excretion of decomposition products accumulated in the body by prolonged inactivity. Exercise, such as walking, out-door games, etc., must be selected for each case, and may readily be overdone. But when the patient's condition demands rest and confinement to bed, the waters are still of equal value, only they must be given in smaller doses.

Diet should be restricted while they are being taken to non-nitrogenous foods, its daily quantity lessened, and the use of alcoholic stimulants prohibited. If digestion is disturbed, a little extract of malt may be administered with each meal. Diabetics, who are forbidden starches, will find an agreeable and effective substitute for wheat bread in the almond bread of Prof. Seegen, the formula for which is as follows: Pound, in a stone mortar, four ounces of blanched

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Jordan almonds to a smooth powder. Put this in a linen bag and boil for fifteen minutes. Mix thoroughly with three ounces of butter and two eggs, add the yolks of two more eggs with a little salt, and beat well. The whites of three more eggs, beaten to a stiff foam, are next to be beaten into the dough; and when formed into biscuits, they are to be baked until well done in a slow oven.

Carlsbad waters are odorless, palatable and free from color, with a faint saline taste, and never produce nausea. Even when taken in considerable quantities they produce no diarrhœa or feeling of discomfort. Dr. H. once drank six tumblers within an hour without the slightest unpleasant effects. They act directly upon the mucous membrane of the stomach and alimentary canal, and secondarily as a powerful alterative—soothing irritated surfaces reached and changing blood from acid to alkaline re-action. During this process, all calculi of the former kind, whether biliary or cystic, are steadily dissolved, gouty concretions softenened and placed in condition for absorption, and rheumatic deposits in muscles are removed. In diabetes mellitus, Carlsbad waters have long been considered as exercising a powerful curative influence. Dr. H. has personally known of cures made at the springs where other forms of treatment had failed.

Since the use of these waters and the Sprudel salt that goes with them, is, in America, mainly confined to these two forms of disease, we cite only cases which are of one or the other class.

Case I.—A. B., physician, aged 35 years, healthy parentage, fine physique, had been systematically doing two men's work for several years in spite of all sort of protest. Five years ago he began to show signs of exhaustion and nervous tire, but still continued work of the most exposed character and fatiguing description until the spring of 1886, when he was pursuaded to take a trip for rest. He visited Brighton, where he remained for several weeks taking the waters and baths; was there attacked by nephritic colic attended with excruciating pains of the severest description, accompanied with passage of several small stones.

Four months after his return he consulted Dr. H, who at once placed him upon Carlsbad water, adding hot Carlsbad baths twice daily, temperature 150° F. for ten minutes each time. These baths are made by adding eight ounces of Sprudel salt to an ordinary bath-tub of water, gradually increasing temperature until the desired heat is reached, and

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should be taken night and morning. Another and effective way of given these baths is by means of vapor. The patient, nude, except for a loose blanket covering stool and person to the neck, is seated on a perforated stool, under which a shallow pan of Carlsbad previously saturated with Sprudel salt is slowly boiled away. Profuse perspiration follows and a rapid absorption of elements of the water as they are in turn volatilised, complete vaporisation being insured by combustion of the dry residue left after water has disappeared.

After a month of this treatment, Dr. B. passed a large number of calculi per urethram, and drawings were made of two of the largest here reproduced.

All gouty symptoms disappeared at the same time. A recent clinical examination showed him free from uric acid urine and calculi, and his general health improved after the course.

Case II.—Mrs. S. of middle age and healthy family. For several years she had suffered with gouty rheumatism and slowly increasing concretions in finger joints, which were steadily growing and causing loss of motion. She was at last attacked by arthritic neuralgia; her system was charged with uric acid. Dr. H. was unable to learn that any calculi had been voided, although all urine was loaded with brick dust and a copious deposit feel from a beaker full kept over night.

Mrs. S. was at once placed upon a course of Carlsbad water and the steam baths of Sprudel salt solution. Six tumblers of the water were ordered to be drunk each day with a twenty minute bath morning and evening. Localized galvanism, descending nerve current, was administered for her neuralgia, which soon subsided.

After forty baths, a distinct relaxation of solidity in the gounty concretions was noticed, and they began to disappear. The neuralgia was relieved after a week. In two months all joints were normal, and clinical tests demonstrated absence of uric acid. Baths were then abandoned and doses of Sprudel salt ordered occasionally to keep bowels soluble. A year has now passed since treatment was finished and Mrs. S. continues in good health.

Case III.—A. Y., man, aged 45, resident of Newport, R. I. Fve years ago contracted acute rheumatism from exposure, which finally became chronic from poor care and constant, necessary hard work in damp a locality. Treatment was

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commenced a year ago, at which time the entire system was charged with uric acid. There were a copious brick dust urinary deposits, concretions in finger joints, firm contractions of fore-arm muscles. "main-ewgriffe" and great weakness. In short, a more unpromising subject would be hard to find.

It was evident that nothing could be done until the man was placed in a more favorable environment; he was admitted into a charitable institute, where he was well fed, comfortably housed, etc. When he began to grow stronger, he was placed on the Carlsbad water cure, steam bath plan. For the first two weeks no water was given internally, and but one bath a day, with plentiful nourishment. On the fifteenth day he was given four half pint tumblers of Carlsbad water, temperature 100° F., which being well borne, were increased to six daily within another week, and the baths doubled. Improvement followed the fourth week, and the water cure was suspended for a month to allow nourishment to be pushed, when it was again resumed and continued for a month. With these intervals for rest, the Carlsbad treatment was followed a year, with the result of restoring Mr. Y. to such health that he is able to do light work.

Case IV.—Mr. G., aged 50, independent gentleman, resident of Providence, consulted Dr. H. in 1889 for sub-acute gout. Digestion seriously impaired; pain of a nagging kind scarcely ever absent from legs and feet. Fever quite high every night; urine loaded with particles of gravel, none large enough to cause serious interference with micturition, but, all when placed under the microscope, of sufficient size and sharpness of angles to account for the irritation present in the urethra.

Mr. G. came to be treated for nervous exhaustion, but the exhaustion was dependent entirely upon his gouty condition, hence he was placed upon treatment by Carlsbad water and the Sprudel bath. He was forbidden wines and stimulating food, and given a sufficient quantity of the Sprudel salts each morning to insure a free evacuation of the bowels. No tonics were ordered and he was directed to abstain from all exercise. The diet was brought down to the simplest possible food, and his hours of eating changed from breakfast at eleven and dinner at eight, to those customary in America. After a week of this functional rest he was directed to take three tumblers of the water, slowly, at six, eight, and ten o'clock in the morning; at eleven a vapor bath was administered, and two hours rest followed, and a light

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breakfast of farinaceous food. A carriage drive of an hour or two occupied the greater part of the afternoon, and after a light nourishing dinner at six o'clock he was order to bed and retain a recumbent posture until five the next morning; then massage was administered thoroughly, followed by a tumbler of hot milk. This regime was continued five weeks, at the expiration of which time a careful examination was made of blood and urine without finding any trace whatever of uric acid. His gout had disappeared, and the joints of the toes which had commenced to enlarge, became flexible, and began to diminish in size. He then added to his diet lean meat of any kind and claret wine. The one tonic employed was general faradization a half hour daily. His condition promptly improved, and in one year after the cessation of all treatment, Mr. G. was in the most vigorous possible health, and made a long visit to Europe, whence he returned in about the same condition as before, with the exception that there were then actual attacks of gravel, and well-formed uric acid calculi. Dr. H. placed him at once upon the same treatment as before, with the same gratifying result. The case shows in the strongest possible light the remarkable and rapid gain in these conditions from the use of Carlsbad water and Sprudel salt.

CASE V.—Mrs. E., aged 37, American, came to Dr. H. last October, for a nervous trouble supposed to be reflex from irritated ovaries, and probably salpingitis. She was anæmic, nervous to a very high degree, with capricious appetite, and with all of the secretions in an abnormal condition. She had used opiates, and was fast becoming addicted to them.

A careful examination failed to reveal any great amount of trouble of the ovaries or tubes, and what was present was diagnosed as being of a reflex character, as well as all of her abdominal pains. A careful examination of the water showed a remarkable excess of uric acid, and was loaded down with brick dust deposit. A carefully selected diet, general faradization every day, taking away of all opiates, plenty of regular exercise, together with three goblets of Carlsbad water every day, supplemented with a dose of Sprudel salts every morning to keep the bowels soluble and regular, completed a perfect cure in three month time. She is now wholly well and hearty, and seven months pregnant.

It would not be difficult to multiply cases, but these five seem fairly illustrative of the uses and worth of these waters when far from the place where bottled, and give a good showing of Dr. H's methods of using them in vapor.

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Apioline—(Pseudo-Apiic Alcohol)—A Reliable Emmenagogue.

The seeds of the *Apium Petroselinum* (N. O. Umbeliferae) have long been known to contain several well-defined principles: notably, *Apiine* a glucoside, *Apiol* a camphor; besides an *essential oil*, composed of an oxidized crystalizable substance dissolved in a *terpine* having a powerful odor of the plant, a low specific gravity and boiling point of 106°. Abundant observations establish the emmenagogue action of the plant; Bourchardat, Vallée, Marcotte, Fauconneau, Corlieu, Bouchut and others are unanimous in this respect, and Siredey goes so far as to say that it is the best emmenagogue whose reputation is indisputably established.

To secure uniformity in therapeutical results, M. Chapoteaut adopted the following process to extract the active principle of the seeds of the plant: After complete exhaustion of the seeds with light petroleum ether, the resulting liquid leaves, on distillation, a semi-congealed residue of neutral substances, fatty acids, etc., which, when treated with alcohol, is partially soluble. The alcoholic solution, on evaporation, leaves a product which, on addition of caustic soda, yields a thick reddish liquid—*a pseudo-apiic alcohol*—boiling at 275° C. Sp. gr. 1. 113. This is *Apioline*, the true active principle of the seeds.

Physiological experiments on animals in the Faculty of Medicine (Paris) laboratories indicate that Apioline has a special action on the circulatory system of the smooth muscular fibres of the uterus, producing vascular congestion and excitement with contraction. This has been followed up by successful clinical observations in severe cases of amenorrhœa, dysmenorrhœa, and other menstrual troubles. From this clinical evidence, it has been positively proved that *Apioline* may be safely used to excite and regulate catæmenia where the menses are wanting or scanty, and where they are irregular with colic and lateral cutting pains; besides the almost certain existence of pregnancy is indicated in doubtful cases, when the flow is not promptly established after a few doses.

Rigaud and Chapoteaut, of Paris, prepare capsules of Apioline, each containing twenty centigrammes (about three minims). Dose should be one night and morning for several days preceding and a couple of days during the menstrual period. Repeat this the following month, after which it is claimed to be rarely necessary to renew treatment.

Dr. Westhaufer reports, among other cases treated with Apioline, one of fifteen years' standing of irregular and very

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painful menstruation. "At her last sickness, the flow came on much freer than usual, and was almost painless. My patient noticed that the flow kept up for three or four days continually, and not, as formerly, stopping on the second day and then returning in three or four days." Dr. Stillman tested the Apioline capsules in three cases of amenorrhœa "with uniformly gratifying results; one case had been particularly slow and obstinate." In a severe case of dysmenorrhœa, Dr. Blair says: "The effect was grand—the patient, a girl of eighteen years, had the *least pain and best showing* which she ever experienced."

Feeding in Typhoidal Conditions.

Dr. Henry C. Boenning, Lecturer on Anatomy and Surgery in the Medico-Chirurgical College of Philadelphia, in a recent clinical lecture, remarked that, for a long time the most serious problem in the management of fever cases was the sustenance of the patient; and, up to within a few years ago, no case of typhoid was considered to have been properly nourished that did not receive its daily allowance of beef-tea and milk. An important fact associated with these low conditions of vitality was overlooked—namely, the depraved digestive power manifested in the imperfect digestion of all aliment, and the general paresis of assimilation of imperfectly digested substances. In typhoidal conditions there is not only a deficiency in the secretion of the digestive fluids, but also a deficiency in the percentage of the active digestive ferments. This is readily susceptible of proof—thus in a condition of protracted hyperpyrexia, established in dogs, the gastric juice drained from a fistula is markedly reduced, excessively acid, and practically inoperative on the various albuminoids. A practical series of experiments in this direction prove the necessity of employing a line of foods which are *pre*-digested. In typhoid fever and typhoidal conditions generally, it is a very questionable proceeding to fill the stomach of the patient with unchanged albumens or starches, or, in fact, any substance that has not been catalytically acted on by an efficient digestive ferment. After surgical operations, or injuries of much gravity, there is very apt to be the same lack of digestive power as in typhoid, and hence foods ordinarily given should be withheld. It has been my plan, after serious surgical operations, particularly after operations on the uterus, tubes, ovaries, bladder, and intestines, as soon as food is admissible, to order for the patient a teaspoonful

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every hour, half hour, or more frequently, of some preparation of peptone—preferably that made by Stevenson & Jester, of Philadelphia. Of this preparation I can say that it is a pure peptone, non-coagulable by heat, and always well borne and promptly effective. Gradually, the quantity is increased to a tablespoonful, and the intervals between the doses increased or diminished according to the requirements of the case. I consider this preparation of liquid peptone a necessity after every severe surgical operation, and have never known it to be rejected. It is immediately absorbed, or, better, perhaps, passes directly into the circulation, through the stomach veins, and the effect is prompt and enduring. In addition, in all these typhoidal conditions, I use milk properly peptonized and emulsified by means of the peptonizing "tubes" of Fairchild, of New York; and the result of this method of feeding is apparent at once in every case. If, in any typhoid or allied state, food, as commonly prepared, is given to the patient, one of three things will happen—either, 1st, it is rejected; or, 2d, it is retained and decomposes; or, 3d, it is partly digested and absorbed, and partly rejected. In view of the lack of the digestive and assimilative power, in cases of typhoid or severe surgical shock, it is entirely unjustifiable to fill the stomach of the patient with unchanged and unfermented foods—nothing, in my opinion, should be given except those diffusible and osmoseble substances, which, without effort on the part of the patient, will pass directly into his blood.

Peripheral Neuritis.

During a discussion, January 8th, 1891 (Med. and Surg. Society, Baltimore), Dr. F. C. Bressler said he had seen a few cases. The first case was that of a woman, thought to be drunk, brought into the city hospital in 1885. She had wrist- and foot-drop, pain in the ankle and along the tibia; the muscles were atrophied. A diagnosis of poliomyelitis in the adult was made. She stayed at the hospital for one month. Another case (Dr. Spicknall's):—A saleswoman all at once was attacked by wasting of the hands, arms, and shoulders. Under massage and strychnia, she recovered. He saw a girl of seven years, attended by himself and Dr. Chambers for catarrhal pneumonia; was getting better, when, suddenly, the muscles of her hands and arms began to waste; she had pain in the course of the nerves; tendon reflex was entirely gone. Under massage and strychnia, she also recovered. Peripheral neuritis, comparatively a

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new subject, was brought to the attention of American physicians, by Dr. M. Allen Starr, of New York, in the Goldsmith lectures.

Dr. J. W. Chambers said peripheral neuritis is more common than is usually thought. He knew of two non successful cases of attempted suicide by taking arsenic, but they did succeed in getting a peripheral neuritis. The first case that came to his attention was six years ago. He called it poliomyelitis at the time. Having learned more of the disease, when he saw a case about a year ago, he looked for and found peripheral neuritis. He thought that in a short time we would hear more of peripheral neuritis and less of poliomyelitis. He saw, last winter, a lady who had retroflexed uterus, and was pregnant. She had pains shooting down both legs, and he thought her hysterical at the time; she soon aborted. About six months after, there was marked wasting of the lower extremities, and, after awhile, of the upper extremities also. She is much better now, and is filling up again. In peripheral neuritis, there is not so marked a deformity from contraction of the muscles as in poliomyelitis, but in a colored man last winter there was very marked deformity from muscular contraction. It is said that the Argyle-Robinson pupil is pathognomonic in tabes dorsalis, but it has been observed in multiple neuritis. One pathognomonic sign is of no use, unless associated with other signs, which must be taken into consideration with it.

Dr. Wm. H. Norris had seen several cases. Six years ago, a highly educated lady, of a very nervous disposition, had been under his care for some time with chronic diarrhœa. She went to New Orleans for the winter, and returned in the spring with malaria. About this time, she became very nervous over some bonds. She was suddenly paralyzed, and suffered great pain. A diagnosis of multiple neuritis was made. She became much atrophied, and there was considerable muscular deformity. She died about three years ago. From 128 pounds at the beginning of the attack, she was reduced to 65 pounds at the time of her death.

Dr. G. J. Preston said the cases narrated go to confirm him in the opinion that peripheral neuritis is a more common disease than it is usually thought to be. It seems to be an American disease, as we do not hear much of it in Europe. This may be due to the pressure of our American civilization, or it may be because it is more closely observed

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and, in consequence, is more frequently reported. Poliomyelitis will often recover, almost perfectly, and rapidly, even in cases where the paralysis is marked. It is probable, in these cases, that the large cells in the anterior horns may be affected (not destroyed) sufficiently to interfere with their functions.

Book Notices.

Wood's Medical and Surgical Monographs. Volume IX. Nos. 1 and 2 (January and February, 1891). 8vo. Pages, each about 250. Published monthly. $10 a year. Single copy, $1. Wm. Wood & Co., New York, Publishers.

The *January* number contains the memorable Address of Dr. R. Koch, before the Tenth International Medical Congress, on "Advances in Bacteriology"—10 pages; a "Formulary of New Remedies and New Medicinal Preparations"—arranged alphabetically—by H. Bocquillon-Limousin—about 200 pages; "Discussion on Anæsthetics," by Drs. Wm. Macewen, Joseph Coats, T. Brown Henderson, Hartley and Robert Kirk—about 50 pages.

The *February Monograph* contains (1) a treatise by Ernest E. Maddox, M. B., on the "Clinical Use of Prisms, and the Decentring of Lenses"—58 pages; (2) one by Thos. Keith, M. D., and Skene Keith, F. R. C. S., on "Electricity in the Treatment of Uterine Fibroids"—163 pages; and (3) a paper by Ernest Hart—20 pages—on "Ether Drinking; its Prevalence and Results."

Text-Book of Hygiene—A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By GEORGE H. ROHE, M. D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore, etc. Second Edition. Thoroughly Revised and Largely Rewritten. With many Illustrations and valuable Tables. Philadelphia and London: F. A. Davis, Publisher. 1890. Cloth. 8vo. Pp. 421. Price, $2.50 net. (From Publisher.)

So much of the successful practice of the physician is dependent upon a proper knowledge of the laws of hygiene that we have often wondered why this department of medical science has so long been without its suitable text-book. Dr. Rohé has seized upon the opportunity presented by the growing demand for such a work, and, in the volume now

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under note, has given students and practitioners a most admirable text-book of hygiene. Now that this work—so reliable in its statements, and so practical in its directions, making it suited especially to the needs of the American—is at hand, we do hope that each of the members of Boards of Health will adopt it for his reading, and thus avoid the display of much of the lamentable ignorance of many health officers, that is so apparent from many of their directions, suggestions, and actions. This is a useful book for every scientist interested in the good health of a community.

Manual of Clinical Diagnosis. By OTTO STEIFERT, M. D., Privat Docent at Wurzburg, and FRIEDRICH MULLER, M. D., Assistant der II Med. Klinik in Berlin. Translated from Fifth German Edition, Enlarged and Revised, with Permission of the Authors, by WILLIAM BUCKINGHAM CANFIELD, A. M., M. D., Chief of Chest Clinic, University of Maryland, etc. Second English Edition, Revised and Enlarged, with fifty Illustrations and one Colored Plate. G. P. Putnam's Sons, New York. 1890. Cloth. 12mo. Pp. 185. Price, $1.50. (For sale by West, Johnston & Co., Richmond.)

We had occasion, in 1888, to commend the former edition most unreservedly to the favor of the profession. Very few important changes have been made in the present edition, for there has been but little to change. So that we have to reiterate our approval of this "Manual," and hope our readers will adopt it as a very essential book for frequent consultation in cases of doubtful diagnosis. A typographical error, we see repeated in this edition, of minor importance, perhaps is the use of the multiplication sign × instead of the sign of addition + in the illustration given in the explanatory sentence about the dose-table on page 144.

Twelve Lectures on the Structure of the Central Nervous System. By LUDWIG EDINGER, M. D. Second Revised Edition. With 133 Illustrations. Translated by WILLIS HALL VITTUM, M. D., St. Paul, Minn. Edited by C. EUGENE RIGGS, A. M., M. D., Professor of Mental and Nervous Diseases, University of Minnesota, etc. Philadelphia and London: F. A. Davis, Publisher. 1890. Cloth. 12mo. Pp. 280. Price, $1.75 net. (From Publisher.)

In no department scarcely does the learning of the anatomist of fifteen or twenty years ago need more revision than in that of the structure of the central nervous system. Rapid discoveries by microscopic sections, etc., have made it necessary that the practitioner should keep himself well read up, in order to avoid errors that he was taught as facts

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during his college days. This is illustrated by the fact that even the teachings during the past four years have required a thorough revision, and much rewriting of chapters, that then were up to the times. But this transitional stage of information seems now about to settle down into settled certainties; so that this edition will prove of lasting value to the practitioner and student who are in search of reliable knowledge. It is a valuable book; well written, well-translated, and well-edited; and the Publisher has spared no pains or expense in making the text an accurate guide. While not a part of the purpose of the author, he has, nevertheless, added many practical statements relating to the parts presided over by the cerebral centres—thus helping the practitioner very materially to locate the lesion which leads to given effects, called symptomatology. In a future edition we hope to see this feature more fully dwelt upon.

Editorial.

Dr. Hunter McGuires Prize Essay—Subject, Pyelo-Nephritis.

In response to a note from us, Dr. Hunter McGuire, under date of March 3, 1891, writes:

"In reply to your letter of late date, I beg leave to say that the subject of pyelo-nephrosis was selected by me because of its great importance. It is spoken of by Beck as "consecutive nephritis." This is really a more correct name for it, but the first name is the one usually employed. It is sometimes spoken of as "surgical kidney." It means a morbid condition of the kidney, the consequence of vesical or urethral disease. Good accounts of this condition will be found in Beck, Ralfe, Pepper, Ziemssen, and many other books. Very truly yours,

"HUNTER MCGUIRE."

Richmond's Physicians for the Poor.

After persistent effort on the part of the Richmond Academy of Medicine and Surgery, the City Council has finally elected four physicians—one for different sections of the city—to attend the calls of the needy poor of the city who may be sick at their homes. The salary of each is $600 a year, beginning March, 1891. The parties elected are good physicians, and will reflect credit on the profession. They

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are Drs. William A. Deas, A. L. Wellford, J. F. Crane, and ——— Wilkinson. Of course those citizens who are able to pay for medical services are not entitled to the free services of the doctors named.

The American Medical Association

Will meet in Washington, D. C., May 5th—8th inclusive, The Railroad Associations have agreed to sell tickets as last year—full fare going and one-third fare returning. But a certificate must be obtained on purchasing ticket going to Washington, or they cannot have the reduction in returning from Washington.

The President of the Medical Society of Virginia, Dr. W. W. Parker, of Richmond, Va, requests us to announce that every Fellow of the said Society who wishes to attend the American Medical Association as a delegate from the Medical Society of Virginia should at once notify him, in order that certificates may be issued in due form.

Mrs. F. L. Weddell

Has located in this city for the purpose of administering electricity in all of its therapeutic forms, and of applying the massage treatment in all of its varieties, etc. She gives special attention to carrying out the physician's directions in detail. The references she makes (in her advertisement on the white card-board after reading pages) satisfactorily show the favor with which she is being received by the profession. She is fully equipped with all the latest improvements in batteries, electrodes, etc.

The Seventeenth Annual Volume

Is completed with this March issue. Subscribers wishing their copies bound as a volume would do well to write for terms, etc., to Mr. S. B. Adkins, Bookbinder, etc., Richmond, Va. The carefully prepared Index of Subjects and of Contributors, issued with each annual volume, makes it a matter of value to have each volume bound.

Peacock's Bromides,

Dr. F. A. Kitchen, of Toledo, O., says that "for a quieter in spinal difficulties, accompanied with brain troubles, * * * affords sure results, with less secondary trouble than any remedy that I have ever used."

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Medical Education, Medical Colleges, etc.

The Illinois State Board of Health has issued its seventh annual volume (for 1890), giving the names and standing of Medical Colleges in the United States and Canada, and a synopsis of the laws regulating the practice of medicine in the various States, etc. This Report embraces the medical institutions of the whole world—making this volume of greater interest to every possessor than any previous Report. The Secretary, Dr. John H. Rauch, and his Assistant, Dr. Wm. G. Eggleston, of Springfield, Ill., deserve great credit for the thoroughness of their arduous work and for the valuable manner in which they have compiled details from so many hundreds of resources. As soon as we can find space, we will reprint some of the useful memoranda contained in this Report.

Bowden Lithia Springs.

The water of these remarkable Georgia Springs is growing more and more in professional favor. Its claims, as set forth in the page advertisement, are becoming established by experience. We would especially call attention to the reduced prices named in the advertisement to those who order the water direct from the Springs on the prescriptions of physicians. A number of patients in this city are using Bowden Lithia Water with great satisfaction. Its analysis, indeed, shows it to be a water of almost unique chemical composition, and points out its valuable therapeutic indications.

The Medical Examining Board of Virginia

Will hold its first semi-annual session for 1891 in Richmond, Va., April 20th, as per full page advertisement in this issue.

Germicidal Action of the Blood.

Dr. J. Wellington Bangs, of Charlotte, N. C., claims (*Med. Rec.*, Feb. 14, 1891,) the credit of being the first to suggest (September, 1887,) this function of the blood.

McArthur's Syrup.

You can never be disappointed with a chemically pure preparation of the Hypophosphites of Lime and Soda. McArthur's Syrup is guaranteed to be pure. See their advertisement on white card-board page, and send for a pamphlet and a sample.

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